Australian Consumers' Association

December 1998

CHOICE

www.choice.com.au

Festive fizzz!

Over 60 bubblies tasted and rated

CHOICE'S Annual Buying Guide

— the best of this year's tests

MORE TESTS: • Mini stereo systems • Compact cameras • Sun shelters • Single-use cameras • Water-efficient shower heads

Christmas shopping: buyer beware

Jane Mackenzie

It never stops surprising us how many substandard products we find in our tests. You're probably less likely now than in CHOICE's early years in the '60s and '70s to buy a major appliance like a washing machine or fridge that's a dud. But all sorts of smaller items continue to perform poorly when we put them to the test.

In this issue alone, for example, we have the following disappointing performers:

- Several garden sun shelters that are not only likely to last you no more than a season or two, but some of which also offer little protection from UV radiation (see page 21).
- A few water-efficient shower heads that trialists reckoned gave neither a comfortable nor an effective shower (page 36).
- A mini stereo system whose speakers could only score 27% (page 43).

One of those unsatisfactory shower heads would have cost you $84, while the sun shelters could have set you back anywhere from $59 to around $200. That's bad enough, but the stereo system would see you about $500 out of pocket.

You might be able to listen to audio products in the shop when you're buying, but unless there's a special listening room the surrounding noise is probably going to hide most of their faults. The shower heads are a different story: you won't know till you get one home and installed that you've bought a lemon.

With the sun shelters it's even worse. Looking at and feeling the fabric they're made from will tell you nothing about either its UV resistance or its durability. You could get it home and have the whole family sunburnt the first time you use it because you believed the manufacturer's unsubstantiated claims ("100% protection", "designed to give you all-day protection", and so on).

Only independent tests like those CHOICE does can protect you from products like this and help you sort out the good from the bad. We don't want you to be disappointed — or at risk — by what you buy.

On behalf of everyone at CHOICE, I'd like to wish you all a very happy Christmas and a safe and savvy New Year.

Jane Mackenzie, Editor

Your letters

We welcome the letters you send us — please always include a daytime telephone number so we can contact you quickly if we want to follow up your letter. We're sorry we can't personally answer every letter we receive, but we do use them in our research. Thanks for taking the time to keep in touch.

Write to us at CHOICE, 57 Carrington Road, Marrickville 2204.
Phone us on (02) 9577 3399.
Fax us on (02) 9577 3355.
email us at ausconsumer@choice.com.au
World Wide Web address: www.choice.com.au

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... yeasty, toasty and sweet — there are so many champagnes and sparkling wines it's hard to choose. CHOICE's expert panel tasted more than 60 to come up with recommendations.

Cover photo: Kent Mears

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For many of you, the best time of the year is just around the corner — your holiday. If it means spending some time in your car, you need to get it prepared too: we show you how.

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Crazy claims, over-the-top ads — the ridiculous, the outrageous or the plain misleading.

▲ *Not many sun shelters provide good protection from UV radiation as well as being likely to last more than one or two seasons. Find out which on page 21.*

Choice Reports

14 CHOICE's Annual *Present*–ation

The festive season means shopping for presents, holidays, parties, Christmas dinner and, in the New Year, sales. We've compiled the top performers and Best Buys from our tests over the past year for you to make the most of your money.

Choice Tests

21 Sheltered from the sun?

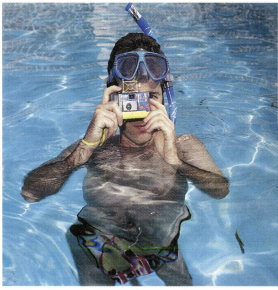
You want protection from the sun while relaxing in the garden, and a sun shelter could be just the ticket. Which ones offer that protection and will last more than a season or two? Read on and find out.

28 Compact cameras

Choosing a compact camera can be more confusing than ever these days, with different systems to choose from as well as fixed focus, autofocus, zoom, telephoto… Find out the pros and cons, and which models are best.

34 Single-use cameras

The range of single-use cameras is getting more and more versatile — now there are panoramic, black-and-white and underwater models. But how good is their quality?



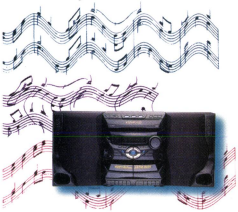
▶ *You wouldn't do this with your ordinary camera!*

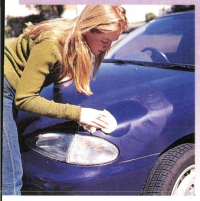
36 Water-efficient shower heads

Save water? Save money? Save the environment? Low-flow shower heads are pretty promising in all these respects. Are they comfortable and effective as well?

43 Budget sound: mini stereo systems

We tested mini stereo systems from the lower end of the market — and found their sound quality is also rather budget.





◀ *How to get a long-lasting shine with the least effort.*

Coming in the next three issues:

Tests: Irons, car waxes and polishes, mobile phones, electric wall ovens, sausages, roof restoration companies, toasters, hifi VCRs, washing machines, 34 cm TVs, convection heaters, breakfast/muesli bars.

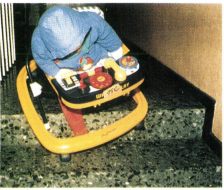
Reports: Water quality/filters, how to choose a tradesperson, hearing aids, your restaurant rights, antioxidants, appliance reliability, choosing a mattress, everyday bank accounts, fiddling with our food (fake fat and other novelties), saving water, hair care products, heating options, loyalty schemes, indigestion remedies.

We try to bring you tests and reports in the planned month, but sometimes have to move an article because of problems that occur during testing and research, or for lack of space in a particular issue. We apologise if this causes any inconvenience.

CHOICE*cuts*

Calling all product safety experts

A RECENT ARTICLE ABOUT PRODUCT SAFETY (CHOICE, SEPTEMBER 1998) highlighted a number of worrying fault lines on the surface of Australia's product safety regime. Among the concerns is that information about product safety is not easily accessible or readily available to manufacturers and distributors. Hopefully, that's about to change.



Baby walkers: where can manufacturers find out how to build a safer product?

The Monash University Accident Research Centre has been commissioned by the Victorian Office of Fair Trading and Business Affairs and the Victorian Department of Human Services to build a database of product safety contacts Australasia-wide. It's intended to be a source of expert advice on matters relating to product safety and safe product design.

Businesses can use this database to get in touch with people and organisations well-versed in the safety aspects of certain products. Currently the range of expertise on the database extends from children's toys to cosmetics to industrial machinery and much more. While the contact list is not exhaustive, it's a good start if companies use the expert information and advice to design and manufacture safer products.

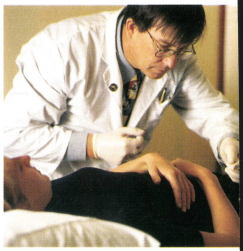
Individuals and organisations who would like to be registered on this database should contact Shauna Sherker, Accident Research Centre, Monash University, Wellington Road, Clayton 3168; phone (03) 9905 1860, fax (03) 9905 1809 or email: shauna.sherker@general.monash.edu.au.

How to haggle

IF YOU WANT TO PAY LESS THAN THE MARKED price for goods and services — start haggling. You may be able to save money on more than just cars and whitegoods, which are the products most often open to price negotiation. Here are some ideas from savvy shoppers at CHOICE that'll save you money.

- **Do your homework:** Research prices and features before you go shopping. Check out junk mail catalogues, newspaper ads, CHOICE tests and go online to compare products. A good site to visit if you can is Trading Post Online at www.tradingpost.com.au. You can search for what you're after as well as see how much people are asking for new and secondhand versions.
- **Say it's expensive:** If the price you're initially quoted seems expensive, say so. You might receive an immediate discount if the salesperson thinks you won't be buying otherwise.
- **Start an auction:** You can save on big-ticket items like cars and home appliances if you get sellers to bid for your business. To do this you set a minimum number of dealers or stores to visit — at least three. Tell each sales representative that you'll be buying within a few days at the best price you get, but won't purchase on the spot. They should give you their best price first time.
- **Offer cash:** Paying cash might get you a lower price. If you pay by credit card, it costs the retailer up to 4% of the price of an item in processing charges, and they may build this into the marked price. Cash upfront in stores offering "12 months interest-free" could also get a cheaper price if the interest was built into the sale price.

Why not share your bargaining tactics with other CHOICE readers? Send a brief description to **Bargains**, CHOICE, 57 Carrington Road, Marrickville 2204, fax us on (02) 9577 3377 or email us at: bargains@choice.com.au.



Alternative health: regulation finally proposed

IN *ALTERNATIVE HEALTH — moving into the mainstream* (CHOICE, July 1997) we argued that regulation of traditional Chinese medicine (TCM) would give consumers greater protection in choosing a practitioner.

A review report by the Victorian Ministerial Advisory Committee on TCM (conducted for all states and territories) has found that there is a significant risk from acupuncture and Chinese herbal medicine provided by poorly trained practitioners. Up to now anyone could call themselves an 'acupuncturist' or 'Chinese medical practitioner'. The advisory committee has proposed that only practitioners who meet minimum training requirements be able to use such titles. The TCM community itself thinks practitioners should have four to five years' training.

Under the proposed regulation, TCM practitioners would be the first complementary health practitioners to be regulated. The registration of TCM practitioners would work under the same rules as the registration of dentists and physiotherapists.

Other state and territory health ministers have agreed that Victoria should lead the way in developing template legislation, which they may in future also adopt. CHOICE welcomes this development as a step forward for consumers in an increasingly popular area of healthcare.

Greenfleet — how to drive a greenhouse-neutral car

DO YOU HAVE A CAR? Then you probably know it produces the greenhouse gas carbon dioxide (CO_2) — about 2.5 kg for every litre of petrol it burns (2.9 kg per litre of diesel; 1.7 kg per litre of LPG). On average, this is about 4.3 tonnes of CO_2 per year.

Cars are also major producers of other air pollutants, such as carbon monoxide, nitrogen oxides and hydrocarbons.

There are several ways you can limit this. For example, you could use public transport or a pushbike more often; you could choose a fuel-efficient model when buying a car; or you could drive more fuel-efficiently. However, if you use a car you *will* produce some pollutants.

Now there's another way to reduce your impact — at least for CO_2. An initiative called Greenfleet offers you the opportunity to drive a 'CO_2-neutral' car for a tax-deductible annual membership fee of $25.

Greenfleet uses your money to plant and care for at least seven native trees for each member car per year. Each seven trees will — over their lifetime — use up about the same amount of CO_2 that the average car produces in one year, as trees break down the gas into carbon (which they use for their growth) and oxygen (which they then release). The reafforestation will also help fight erosion and soil salinity, as well as restoring natural habitats.

So far, more than 200,000 trees have been planted with the membership fees from around 4000 cars — currently as part of large reafforestation projects in Victoria. However, with membership increasing, Greenfleet is looking for projects in other states as well.

The initiative is run by the Foster Foundation, a not-for-profit environmental education organisation. You can join by calling 1900 140 197 or on the Greenfleet website at www.greenfleet.com.au.

CHOICE recently became a Greenfleet member, and committed our nine cars to the program.

If you want to work towards a greenhouse-neutral car, you can join Greenfleet via its website.

CHOICE is one of many consumer magazines from organisations worldwide that make up Consumers International. Get the lowdown on what's happening with your fellow consumers around the world in World Consumer Snapshot.

Sports shoes offer little support for workers

Most people know that workers in Asian sports shoe factories get very little of the money from the exorbitant retail price of the big-name shoes they make. But you may be surprised to know *how* little.

Belgium's *Test-Achats* magazine worked out what your consumer dollar pays for, and who gets it, from the sale of a 4000 F (approx. $A200) pair of shoes.

Materials and production costs come to about $20, and the factory owners collect a $4 profit. Of the rest, corporate head office gets $76, the retailer $65, and the government $35 (sales tax).

And the person who actually makes the shoes? 75 cents.

Battle of the Beers II

When we saw that Australia's own **FOSTER'S Lager** was pitted against some of Europe's best beers, we couldn't resist reporting on the latest Eurobeer test in Spain's *Compra Maestra* consumer magazine.

Of the 33 pilsener/lager-type beers on test, the overall winner was Spain's **KELER 18**, with **HEINEKEN** (Holland), **TROPICAL PILS** (Canary Islands) and **AGUILA AMSTEL** (Spain) making up the top group. British beers were conspicuously absent. Could this have been an attempt to avoid the humiliation of the Belgians' test (see *World Consumer Snapshot*, November 1998), or because they couldn't find any British pilsener-type beers?

As for **FOSTER'S**, it came 27th overall and experts rated it poorly for taste. But we're pleased to report it got the top rating for clarity and lack of undesirable additives.

A good reason to avoid mowing the lawn?

Germany's *Test* magazine reports that one two-stroke lawnmower *without* a catalytic converter produces the same hydrocarbon emissions per hour as about 200 cars *with* catalytic converters.

Hydrocarbons are among those chemicals responsible for photochemical smog, and the German environmental protection authority recommends the use of electric or manual push mowers. Or, better yet, you could simply take the motor out of your Porsche and put it in your mower — think how fast you'll get the lawn done!

YOURletters

Health insurance issue takes hold

Our health insurance articles in August CHOICE really struck a chord with readers, and Your Letters opens up the debate.

Fund Medicare properly

Your August issue of CHOICE on health insurance shows just what a complete hash is being made of our medical system by the Federal Government's notion that it can 'save' the private health insurance industry.

Muriel Holden of Victoria [who was quoted on the back page] hit the nail on the head with her comment that, "If we had a properly funded Medicare system by a larger levy on taxable incomes, there would be no need for all these private health funds."

I believe the majority would agree with her and I for one would wholeheartedly support a doubling of the levy to achieve this.

Perhaps CHOICE could do an article on the pros and cons of such a proposition, particularly as the Government is at a loss for sound ideas on this subject.

B Smith
Curtin, ACT

Tax reform needed

Your article on health insurance has prompted me to think about several aspects of how government services are funded via taxes, and I have come to the unwelcome conclusion that we simply don't pay sufficient taxes to cover current demand.

The national ethos regarding taxes seems to concentrate on paying as little tax as possible, either through evasion or minimisation. I must say I'm no different here, having tried to structure my finances for tax efficiency (not avoidance!).

The trouble is, the more money you have, the more options (deductions, franked dividends, trusts, etc) are open to taxpayers to minimise the tax they pay, so often the burden falls disproportionately on the PAYE earner. Tax reform is urgently needed, but I can't see that a GST will really address these issues efficiently.

What we as a nation have to change — and I can't see it happening in a hurry — is our attitude to taxes. We all benefit from Medicare, from subsidies, from grants, from government services which are funded from taxes. If we want the services, we have to pay for them, and we also have to wake up to governments that promise tax cuts in election campaigns and not vote for them if those tax cuts aren't warranted.

As to health insurance, I'm firmly in favour of Medicare, and I do not intend ever to have private health cover. If Medicare can't stretch the distance, then we have to tell governments to put up the levy.

Patrice Connelly
via Internet

Increase Medicare levy

I agree with Muriel Holden of Victoria. Increase the levy by a small amount and fix our world-class Medicare and hospital system to make it even better. The amount of money that is spent on private health insurance is ridiculous.

Having my first baby left me nearly $800 out of pocket using the private health system, plus the insurance premiums on top of that. The birth of my second child cost me nothing in the public health system, apart from my contributions to Medicare. Even if you're paying the high-income penalty, you're still better off with Medicare.

Leigh Davis
via Internet

Health insurance a private responsibility

I am a worker and have enjoyed the benefit of private health insurance for more than 40 years. My parents had private health cover and inculcated in me (and my brother and sister) the need for health cover, and emphasised the value and benefit. At 85, my mother still has private health cover.

Needless to say, I am opposed to free health benefits supplied by the government. The taxpayer ends up paying for it anyway. Society has tended to rely solely upon government to provide a multitude of things it has no business being involved with. That is not socialism but communism.

It is the right and responsibility of *all* Australians to have private health insurance. No-one can take it from you. I find the benefits I enjoy are better than those provided by Medicare and other health insurance providers.

Our children have been encouraged to take out health insurance. If everyone else did likewise, there would be less drama associated with supply today of necessary medical facilities.

Not too many years ago, the government through its tax office rewarded those thrifty people by a tax deduction in the order of the amount of premiums paid. Perhaps if the party in government was sufficiently forthright it would see the sense of returning this incentive to the people. The new incentives don't go quite that far.

Brian R Webb
Northam, WA

Cost is the problem

In March last year I resigned — after 34 years of membership — from a private health fund. I still have not regretted that move. In two weeks' time I shall be having my third minor operation because I am perceived to be at risk of colon cancer.

I was privately covered for my first operation on top cover, and was annoyed at the gap that I had to pay. Last year I had the same operation as a private patient in a public

hospital, with the same surgeon. I had to pay for the bed and for the gap for the anaesthetist. This year I was going to go in as a public patient in a public hospital, but the waiting time was longer than I'd expected, and I thought that if I went in as a private patient, I would be attended to sooner. Maybe I am, but I don't know for sure.

About four weeks ago, my wife was stricken with bronchopneumonia and admitted to a public hospital. The care and attention she received from the hospital staff were perfect and it didn't cost us a cent. If she was admitted to a private hospital, I expect the attention would be much the same, but I would have to pay extra. So what would be the point of being a member of a private health fund?

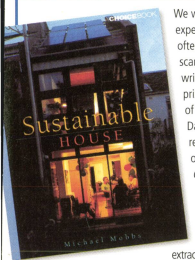
When I left private health insurance last year, I was paying $190.70 per month for top cover and ancillary cover. Yesterday I found out that the same cover would now cost me $304. I can't afford that, so why should I budget for this costly item when there's really no need? By not joining I will save $3648 a year at the present rate.

I agree with your point that people should have the choice whether to be privately insured or not, and that governments should avoid handouts. I am sure the main reason people aren't privately insured is because of the cost and the gap. It would help if the government allowed the gap to be covered, but the cost of private insurance is a health fund problem and they should find a way to bring the cost down — and not by saying the cost would come down if we paid the first $500 or so, because that would mean you'd still be putting your hand in your pocket for the privilege of being privately insured. There really is no choice these days.

I am happy with Medicare because it provides good health cover. I have a sister-in-law living in the US and I feel very sorry for her family because they live in dread of becoming seriously ill. They can't afford to be insured and don't have anything like Medicare.

A F P Gyford
Jamisontown, NSW

LETTER OF THE MONTH



We want to hear from you — your experiences help our research and often let other readers know about scams and rip-offs. To thank you for writing to us, *Your Letters* awards a prize of a CHOICE book to the 'Letter of the month'. This month's winner, David Vaughan of Kambah, ACT, receives *Sustainable House*, or any other book of his choice from the *Consumer Bookshelf* on page 40.

We're sorry we don't have the resources to answer all your letters personally, and in the magazine we may edit them or print only an extract. See page 2 for how to reach us.

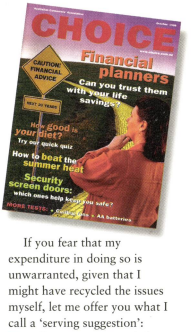
CHOICE mailing glitch

As many of you told us, and others no doubt noticed, CHOICE experienced a glitch in the mailing of the October issue — some subscribers received two, three or more copies instead of the single one they were expecting.

We're sorry for the inconvenience this caused both them and the other subscribers who consequently didn't receive their expected copy until very late in the month. But we were heartened by the number of you who took the trouble to let us know of the problem, and to make creative suggestions as to what you'd do with the extra copies. Thanks to you all for your patience, humour and goodwill, and here are a couple of examples of the many letters we received.

■ May I express my sincere appreciation for your offer of not one, not two, not three but *four* issues of CHOICE magazine for October 1998. Evidently being randomly selected for a blind test, I am pleased to commend you on your quality control. It definitely appears to me that all four issues are the same. There is no doubt: you are successfully printing and packaging more than one issue in the same way.

Having read, and of course enjoyed, one of the two issues received on Friday, October 9, I have in my linear western fashion — a mere derivative of Grecian and Arabic philosophies — felt that the marginal payoff from reading the other issue received on Friday, October 9, or the two received on Monday, October 12, might be small. I therefore return them to you.



If you fear that my expenditure in doing so is unwarranted, given that I might have recycled the issues myself, let me offer you what I call a 'serving suggestion':

■ Roll any one issue tightly, forming a surprisingly rigid cylinder.

■ Carefully approach the back of your circulations software programmer's head.

■ Offer helpfully direct advice.

■ Mention quietly that you have two other issues to spare.

David Vaughan,
Kambah, ACT

P.S. I regret I cannot follow through on my offer. My wife has purloined the spare issues to distribute among her colleagues at work; an action to be appreciated as much by your programmers as by your circulation manager.

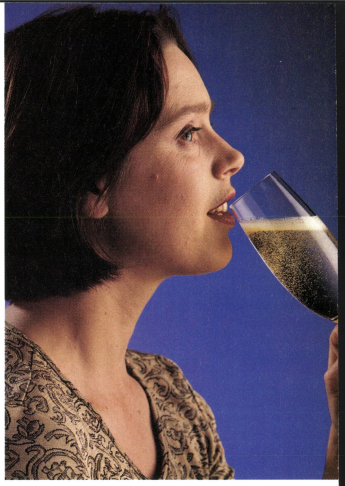
■ I admit that my financial management is not perfect, and I really should get serious about my diet, and that I would love to beat the heat of Alice Springs in the summer. However, did you really have to send me four copies of the October issue of CHOICE to remind me?

Unless you tell me otherwise I'll deliver the extra three copies to the Alice Springs Town Library for the enjoyment of their readers. Who knows, you may even get a new subscriber or two.

Andy McNeill
Alice Springs, NT

Sparkling, *frothy*, fruity...

Not to mention yeasty, toasty and sweet. With such a dazzling breadth of tastes and aromas sealed under wire, cork and foil, how in the world do you go about choosing a sparkling wine or champagne?



IN BRIEF

- **A panel of experts tasted over 60 champagnes and sparkling wines — find out what they thought of them on pages 12 to 13.**
- **Is it worth spending $180 or more on a bottle of 'real' champagne? We found an Australian sparkling wine, with a humble price, that impressed the experts just as much.**

WHILE ENJOYMENT OF A WINE is almost entirely a matter of personal taste, there are definable differences between a quality sparkling and one that just "falls away flat", as a seasoned taster would say.

Our panel of experts tasted over five dozen champagnes and sparkling wines, costing from $5 to over $180. The wines were separated into three price brackets, then tasted and scored. The results on pages 12 to 13 will take much of the guesswork out of selecting a sparkling wine or champagne — not just in terms of getting a better-quality wine, but in choosing one with a particular aroma or flavour to suit your taste.

What's in a name?

Quite a lot, actually. Like an aristocratic pedigree, the title of champagne confers a sense of supremacy on the old guard — the *grandes marques*.

Only wines that come from the Champagne region, about 140 km east of Paris, can rightfully call themselves by that name. (While some Australian sparkling wines are marketed as champagnes, under an agreement with the European Union that will eventually stop.)

The Champagne region benefits from unique growing conditions. It's one of the northernmost wine-producing regions in the world, with a cool climate that warms up just enough for grapes to grow.

Only three varieties of grape are grown in the region: chardonnay, pinot noir and pinot meunier. Because of the borderline growing conditions, it takes a long time for them to ripen. For champagne, the winemakers harvest when the grapes are just beyond under-ripe green, but still well below table wine ripeness.

An auspicious beginning

True champagne must be made the traditional way — *méthode champenoise* (MC).

To begin at the beginning, grapes are picked (yes, sometimes by hand) and pressed. The juice is clarified — it's left to settle or is filtered — then pumped into barrels or stainless steel tanks along with yeast cultures. The juice ferments for one to two weeks.

The product of this first fermentation, called a base wine, is blended with other base wines — perhaps dozens if not hundreds — to produce the desired aroma, taste and style. This is the art of *assemblage*.

After *assemblage*, the wine is bottled with sugar, yeast culture and often a riddling agent (explained above right), and then sealed. During the initial four to eight weeks of this second fermentation the yeast converts the sugar to alcohol and carbon dioxide, creating considerable pressure — about 80 pounds per square inch, around the same pressure as inside a double-decker bus tyre.

Throughout the rest of this stage — which by French law must last at least one year for non-vintage champagne and three years for vintage — the wine develops

its character. This time spent 'on the lees', when the wine matures in yeast, is referred to as the wine's *tirage* age.

In the course of the second fermentation yeast deposits form and, as the bottle is turned regularly, this sediment (yeast lees) works its way down to the neck. The riddling agent assists the process, mainly by preventing the yeast from sticking to the bottle.

Finally, the neck is placed in freezing brine, the bottle is unsealed and the yeast, now a frozen ice plug, is expelled as a result of the pressure in the bottle. And because a little wine escapes along with the yeast, the bottle is then topped up with the same wine blend and a *dosage* — generally a small amount of a liqueur made up of wine and sugar. After that it's corked and wired for sale.

The bottle that you buy is therefore the same bottle in which the second fermentation process took place.

Australian sparklings

Even those experts who agree that premium Australian sparkling wines hold their own against the *grandes marques* concede that no sparkling wine created outside those sacred 85,000 acres commands as much mystique. It's enough to instil an inferiority complex, but Australian sparkling wines definitely have an attractive quality and character all their own. And for good reason.

Our growing conditions make a big difference to the grapes we grow and the wine we make. With a warmer climate than the Champagne region, Australian sparkling wines spring from comparatively riper fruit, yielding a more dominant fruit-rich flavour.

The less expensive Australian sparkling wines come from a wide variety of grapes (not just the traditional three) grown in hotter irrigation areas, and are usually made using the transfer method, not MC. Instead of taking place in individual bottles, the second fermentation takes place in a bulk pressure tank. The wine is then 'transferred' to bottles.

The premium Australian sparklings, on the other hand, often spring from the three traditional champagne grape varieties, come from cooler regions, and are made according to the MC tradition.

How the wines fared

Our panel of five experts — three winemakers and two wine consultants — tasted and scored the wines in three separate price brackets. Scores between brackets are not directly comparable.

■ As a group, the batch of Australian sparkling wines in the **$10 or less** bracket lacked the long-flavoured complexity of the more expensive wines, but nevertheless managed to impress the expert tasters with their prices. Said one taster, "You're dealing with wines that are, on the average, clean, fresh and somewhat neutral — but safe drinks. And given the prices on the world scale, they define themselves as good value for money."

Not bad at all. In fact, only one wine in this bracket, the **COCKATOO RIDGE Brut NV**, came in with a score below 14 (any score that's 14 and over is considered

The standout sparkling wine of the test: the Sir James Vintage 1994 (around $21), which the experts rated as highly as three champagnes costing $58 to more than $180.

THE CHOICE MIXED DOZEN

$10 or less

	$$ MINCHINBURY Brut Private Cuvée	$5.85
equal	**SEAVIEW Champagne Grande Cuvée**	$7.85
equal	**SEPPELT Sunday Creek Pinot Noir Chardonnay**	$9.80

Between $10 and $20

	SEAVIEW 1994 Pinot Noir Chardonnay Vintage Reserve Brut	$15.55
equal	**$$ KILLAWARRA Premier Vintage Brut 1994**	$12.45
equal	**$$ SIR JAMES Brut de Brut Pinot Noir Chardonnay**	$12.90
equal	**YELLOWGLEN Brut Crémant**	$14.80

More than $20

	CHARLES HEIDSIECK Champagne Brut Reserve 1994	$58.00
equal	**LOUIS ROEDERER Cristal Champagne Brut 1990**	$186.25
equal	**$$ SIR JAMES Vintage 1994**	$21.00
equal	**TAITTINGER Champagne Brut Reserve**	$58.15
equal	**VEUVE CLICQUOT PONSARDIN Champagne Vintage Reserve 1990**	$66.95

Prices are based on nationwide checks in October 1998.
$$ denotes good value in its price bracket.

TIP

Champagnes and sparkling wines are not usually intended to improve with age after they've been disgorged, corked and wired (the aging that really counts is the 'tirage' age — see *An auspicious beginning*, page 8). For the most part these wines are ready to drink by the time they reach the retailer.

But in our last test of champagnes and sparkling wines (December 1996) the expert panel came across quite a few that had clearly stayed on the retailer's shelf for too long. These wines had lost their freshness and had become over-developed while they sat around waiting to be sold.

So we're repeating our advice: as most sparkling wines don't have a date letting you know how long ago they were disgorged, play it safe and shop at a place where you can be confident the wine hasn't been languishing on the shelves. Also check that the wine isn't stored in a hot, sunny location or under fluorescent lights, as that can ruin the taste as well.

— at the very least — a clean, safe, commercial wine; the maximum score is 20). The wine that impressed the experts the most in this bracket was the **SEPPELT Sunday Creek** — even though it had the same average score as the other top wines in this group, it was regarded as a standout.

■ More complex styles became evident in the second price bracket. The **$10–$20** wines generally showed more character, most likely because better-quality grapes were used, probably grown in cooler regions. The **SEAVIEW 1994 Pinot Noir Chardonnay Vintage Reserve Brut** came out on top with its rich, full flavour.

■ The third bracket — over **$20 to about $180** — was made up mostly of champagnes. These wines had richer, longer, *bigger* flavours compared to the others. **CHARLES HEIDSIECK Champagne Brut Reserve 1994** scored highest, but Australia's **SIR JAMES Vintage 1994**, at just over $20, sat comfortably in the company of a $186 bottle of **LOUIS ROEDERER**, a $58 bottle of **TAITTINGER** and a $67 bottle of **VEUVE CLICQUOT**.

It's not so black and white

We also asked a lay panel to taste some of the wines the experts rated. That their impressions and scores didn't always mirror the experts' only confirms the obvious: the enjoyment of a wine is a very fickle, subjective matter.

Having said that, though, if you're faced with a choice of sparkling wines and don't know which to pick, you'll be better off buying a wine that the experts scored well. They're trained to ignore their personal preferences and concentrate on what's good or not so good about a wine, and to recognise the style it's aiming for.

The *Mixed emotions* wines in the table were ones the experts couldn't agree on — while their average scores were good, we couldn't include them with the rest because there was too much variation among the experts' opinions. If you're the adventurous type, give one of them a go.

The panel

Special thanks to our panel of five expert tasters who lent their time and expertise to the trial (clockwise from top left): Ed Carr, winemaker, BRL Hardy; Louisa Rose, winemaker, Yalumba; Dr Tony Jordan, winemaker, Domaine Chandon; Peter Bourne, wine consultant, Sydney; David Wollan, consultant, Wine Network Australia.

Storing and serving

■ Sparkling wines and champagnes should be stored horizontally in a cool, dark place. They're ready to drink as soon as they reach the market, and they generally *don't* get better with age (some definitely do, but you'd have to ask an expert about which ones would improve by being cellared, and which would simply lose freshness).

■ It's best served chilled, but never from the freezer — it will get too cold and the flavour will be suppressed. Instead, put it in a bucket of ice and water for around 30 minutes, or in the fridge for a couple of hours.

■ The best way to open a bottle *isn't* to shoot the cork as far as possible. Instead, hold the cork while slowly twisting the bottle, gently easing the cork out (if you go for the volcano effect you're going to lose some of the fizz, not to mention some of the wine).

■ Serve it in a long-stemmed tulip or flute-shaped glass — it concentrates the aroma and makes the bubbles last longer.

■ Tilt the glass and pour the wine against the side, not down into the centre.

■ If recorked and refrigerated, it should keep for several days.

It was a very good year...

Vintage has two meanings. It's the term for the annual grape harvest, and it's also the term for a wine produced from a blend of grapes, mainly (at least 85%) from a particular year's harvest.

In other words, a 1990 vintage would have been made from grapes harvested in that year. The vintage could still be a blend of different base wines from different areas, but those wines will be derived from the 1990 vintage.

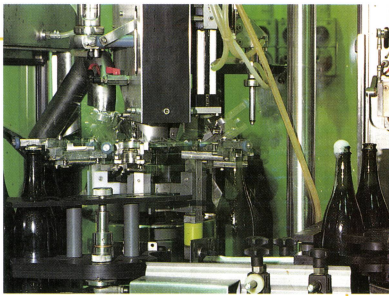
Non-vintage wines, as you might guess, are a blend of base wines from different years. Blending wines from different years allows winemakers to achieve a more consistent 'house' style, even when the characteristics of the grapes change from year to year.

Why do winemakers decide to make a particular harvest a vintage year? The quality and characteristics of the grape harvest will vary according to climatic factors like frost, sun, rain and heat. If a particular harvest proves to be consistently good, winemakers are more likely to produce vintage wines from that year.

Non-vintage wines are not considered inferior, but they're often cheaper than their vintage counterparts from the same winemaker.

Bubbly words

- **Aldehydic:** A nutty or sherry-like aroma formed as a by-product of normal yeast fermentation and oxidation.
- **Assemblage:** The blending of base wines (after the first fermentation) to produce a certain aroma, taste and overall style. It takes place just before the second fermentation.
- **Bead:** The bubbles: the smaller the better.
- **Brut:** Dry, less sweet.
- **Cru:** A grape-growing village in the Champagne region — there are 312 of them.
- **Cuvée:** 1) The juice that's extracted from the first pressing of grapes; 2) a blend of wines obtained during assemblage.
- **Dégorgement (disgorgement):** A stage in the méthode champenoise (MC) process when the neck of the bottle is placed in freezing brine to freeze the deposit of yeast lees, which is then expelled. (See *An auspicious beginning*, page 9, for more.)
- **Dosage:** Another part of the MC process, it's the addition of a liqueur, generally made of wine and sugar, after disgorgement and prior to final corking.
- **Lees:** Yeast sediment that accumulates in the champagne bottle, especially during the second fermentation. The time spent 'on the lees' is largely what gives the wine its character. See the main article for more on this. Australian law requires at least six months 'on the lees' for bottle-fermented sparkling wine, and a minimum of nine months if it's to be labelled as MC.
- **Méthode champenoise (MC)**: The traditional process for making champagne. It's also practised in Australia — see *An auspicious beginning* for more.
- **Mousse:** The fizz and bubbles of a sparkling wine, and the sensation they produce.



Automated disgorgement at Peterson's Champagne House in the Hunter Valley.

- **Muselet:** The wire holding the cork.
- **Non-vintage (NV):** Wine produced from a blend of grapes from different years' harvests.
- **Prise de mousse:** The period of second fermentation during MC.
- **Riddling:** The process leading up to disgorgement, where the bottles are turned regularly so that the yeast sediment, or 'lees', works its way down the neck of the bottle. Also referred to as *remuage*. A riddling agent is often added to assist this process.
- **Tirage age:** The time spent 'on the lees' during second fermentation.
- **Vintage:** 1) The harvesting of grapes; 2) wine made from a blend of grapes mainly from a single vintage (harvest season). See *It was a very good year*, left, for more about vintage.

The question of cork

When you buy a bottle of wine — whether it's still or sparkling — if it tastes and smells 'off' it could be because of the cork. A few of the experts on the panel called for second bottles of a number of wines during the taste test, suspecting the first bottles were affected by cork 'taint' or some other defect.

- **Where does cork come from?** Cork comes from the bark of the cork oak tree, which is indigenous to western Mediterranean countries. Half the world's supply of cork comes from Portugal. The trees are first stripped of their bark when they're at least 25 years old. The bark grows back and continues to be harvested once every nine years for about 150 years.
- **What's the problem?** A 'corked' bottle of wine is one that's been contaminated by mould on the cork. The resulting compound gives a pungent, mouldy smell to the wine. However, wine can go off for reasons not associated with cork — and that's where you get a bit of friction. Winemakers blame the cork industry for supplying tainted cork and not addressing the problem more vigorously — some estimates put the level of cork taint at around 3% to 5%. But the cork industry points out that faults can be introduced at almost any stage of wine production prior to the cork being placed in the bottle. Winemakers fire back that if that were the case, an entire batch of wine would be affected, not just certain bottles. Blame gets tossed about like a football.
- **What are the alternatives?** Increasingly, some winemakers have begun using synthetic corks, but none is yet widely available for sparkling wines.
- **If you have a bottle of wine that's off**, return it for a refund or replacement — and the same advice holds true in a restaurant.

Notes to the table *(see overleaf)*

1 Additives

All the wines in the test except the **CROSER** have sulphur dioxide (220) added to them to prevent browning of the grapes and the wine, and to act as a preservative. Many asthmatics are sensitive to sulphur dioxide, and it could cause an asthma attack. As a rule, champagnes and sparkling wines have less sulphur dioxide than still white wines because carbon dioxide (which provides the fizz) is a natural preservative.

Some wines also have ascorbic acid (300), erythorbic acid (315) or sodium erythorbate (318) added to prevent browning.

2 Average score

Each expert gave the wine a score out of a maximum of 20: 3 for appearance, 7 for 'nose' and 10 for 'palate'. This is the international show scoring system for wines.

The panel didn't know which wine they were tasting, but they did know which price bracket it was in. The scores are only comparable within, not between, the three price brackets.

3 Tasting notes

These are compiled from the panel's tasting notes. Combined with the scores, they should give you a good indication of the wines' aroma and flavour.

The CHOICE Mixed Dozen

Wine (in order of tasting score within price groups)	Avg. price ($)*	Origin	1 Additives	2 Average score	3 Tasting notes
$10 OR LESS					
MINCHINBURY Brut Private Cuvée	5.85	Australia	220, 315	15.5	Light yellow-green colour; fresh fruit and nutty/cashew aromas; fresh palate with sweet, floral flavours — "simple style, good drinking"
SEAVIEW Champagne Grande Cuvée	7.85	Australia	220, 315	15.5	Straw colour; slightly earthy/weedy and yeasty aromas; green, herbaceous palate with sweet and sour flavours — "some individual character"
SEPPELT Sunday Creek Pinot Noir Chardonnay	9.80	Australia	220, 315	15.5	Deep yellow colour; caramel and smoky/toasty aromas; creamy palate with Vegemite and toast flavours — "tastes just like breakfast"
BLUES POINT Brut Reserve	10.20	Australia	220, 300	15	Light yellow-green colour; smoky, cheesy, nutty aromas; sweet palate with a sour/lemony style — "drinkable but plain"
MATTHEW LANG Brut Cuvée Extra Dry	5.50	Australia	220, 315	15	Pale straw colour; light nose, some stalky/herbaceous aromas; warm, sweet, long-flavoured palate — "fresh, lively, commercial"
MINCHINBURY Brut de Brut Private Cuvée	5.75	Australia	220, 315	15	Straw colour; clean, fresh nose with some cheesy/yeasty aromas; simple palate with slightly cheesy/yeasty flavours — "clean, fresh, simple"
MINCHINBURY Fine Private Cuvée	5.75	Australia	220, 315	15	Light rose colour; sweet confectionery nose with some berry aromas; candy flavour with a dusty dry finish — "a bit lolly-like"
ORLANDO CARRINGTON Fine Champagne Brut	7.15	Australia	220, 300	15	Pale straw colour; unusual butterscotch nose with a touch of toast; tropical fruit palate, soft and sweet — "easy drink with some character"
QUEEN ADELAIDE Woodley Brut Champagne	6.85	Australia	220, 315	15	Light straw colour; light yeasty/toasty nose; sweet, soft, clean palate with a slight Weetbix cereal flavour — "typical of its class, neutral"
SEAVIEW Champagne Brut	7.80	Australia	220, 315	15	Light bronze colour; bready/toasty/yeasty aromas; strong, upfront palate with a bitter, acidic flavour — "over-the-top style"
SEPPELT Great Western Imperial Reserve	6.75	Australia	220, 315	15	Young straw colour; fruity/sherbet and yeasty aromas; clean, fresh, citrus acid palate with some yeastiness — "fault-free but uninspiring"
ANGAS BRUT Premium Cuvée	7.50	Australia	220, 300	14.5	Light bronze colour; smoky/earthy/yeasty aromas; creamy nougat flavour, good length but a little coarse — "tough but interesting and different"
JEAN PIERRE & CO Classique Celebration	5.55	Australia	220, 300	14.5	Deep yellow colour; over-developed, somewhat rank nose; lolly/sherbet palate, very sweet and creamy — "not an easy drink"
KILLAWARRA Brut Champagne	8.90	Australia	220, 315	14.5	Mid yellow-gold colour; developed nose with bready, dusty aromas; nougat and cream flavours with a hard, astringent finish — "a little too tough"
KILLAWARRA Brut Crémant Champagne	8.70	Australia	220, 315	14.5	Mid yellow-gold colour; bready, developed nose; sweet, full-ripe fruity palate and some nougat flavour — "fruity"
MINCHINBURY White Seal Private Cuvée	5.75	Australia	220, 315	14.5	Pale yellow colour; light, simple, plain nose; slightly empty palate, soft and sweet, some strawberry flavour — "plain, easily approachable"
OMNI NV	9.25	Australia	220, 300	14.5	Deep golden colour; candied fruit, toasty/cereal/biscuit aromas; coarse, acidic palate, bitter with hard finish — "lacks lift"
ORLANDO CARRINGTON Vintage Brut 1995	7.00	Australia	220, 300	14.5	Medium straw colour; intense, developed nose with slight cheese/onion/straw aromas; short, hard, coarse palate — "thin and hard"
SEAVIEW Champagne Brut de Brut	7.70	Australia	220, 315	14.5	Light straw colour; sweet tropical fruit nose with a yeasty aroma; upfront palate, slightly bitter and acidic — "a little hard"
SEPPELT Great Western Brut Reserve	6.75	Australia	220, 315	14.5	Pale gold colour; slightly bready/toasty nose, some fresh fruit aromas; sweet, soft palate with confectionery flavours — "average"
GLASS MOUNTAIN Classic Brut	9.20	Australia	220, 315	14	Yellow-green colour; perfumed, rose-petal nose with a strawberry aroma; muscaty palate, sweet, short and coarse — "fragrant/floral style"
WYNDHAM ESTATE Wyndham Cuvée Brut 1996	8.85	Australia	220, 300	14	Pale gold colour; green, herbaceous nose, some lemon/citrus aromas; coarse, lean, acidic palate, slightly sweet — "green, loud, unbalanced"
COCKATOO RIDGE Brut NV	9.95	Australia	220	13.5	Pale salmon-pink colour; musty/earthy/yeasty nose; tealeaf/green palate with some wheat cereal/bready flavours — "lacks generosity and style"
$10 TO $20					
SEAVIEW 1994 Pinot Noir Chardonnay Vintage Reserve Brut	15.55	Australia	220, 315	16.5	Mid-yellow colour; attractive, toasty, developed nose with lots of yeast complexity; rich, full, aged palate with long sweet flavours — "generous"
KILLAWARRA Premier Vintage Brut 1994	12.45	Australia	220, 315	16	Straw colour; rich, musk-style nose with a dusty drapery aroma; yeasty/nutty palate, sweet honeycomb flavour — "complex, round and long"
SIR JAMES Brut de Brut Pinot Noir Chardonnay	12.90	Australia	220, 300	16	Deep straw colour; big toasty nose, rich mushroom style and some caramel aroma; full, sweet palate, slightly hard — "interesting, aged style"
YELLOWGLEN Brut Crémant	14.80	Australia	220, 300	16	Mid-straw colour; rich honeysuckle/apple aromas; light, clean, fresh palate with nutty, confectionery flavours — "dessert style"
GRANT BURGE Pinot Noir Chardonnay	18.50	Australia	220, 318	15.5	Apricot colour; toasty/bready/yeasty nose with a touch of caramel; dry palate with some sweet and sour flavour — "on the dry side"
ORLANDO Trilogy Cuvée Brut Pinot Noir, Chardonnay, Pinot Meunier	12.90	Australia	220, 300	15.5	Light straw colour; green, herbaceous, grassy nose with some dusty/cheesy aromas; creamy, nutty palate, lean but long — "simple and youthful"
WOLF BLASS Blass Brut	13.20	Australia	220, 300	15.5	Bronze colour; toasty/yeasty Vegemite nose with some tropical fruit aromas; clean, green, acidic palate, a little short — "fresh herbal style"
WOLF BLASS Vintage 1995 Pinot Noir Chardonnay	16.65	Australia	220, 300	15.5	Straw colour; youthful citrus nose with cheesy/apple aromas; zesty, green, acidic palate, hot/gunpowder flavours — "lacks age"
YELLOWGLEN Y	19.70	Australia	220, 300	15.5	Light straw colour; smoky/woody nose with a bit of yeast; sweet, simple palate, some nice vanilla flavours — "lacks intensity"

Wine (in order of tasting score within price groups)	Avg. price ($) *	Origin	1 Additives	2 Average score	3 Tasting notes
YELLOWGLEN Yellow	11.75	Australia	220, 300	15.5	Light bronze colour; dull, neutral nose with a hint of strawberry; malty, nutty, creamy palate with fruit sweetness — "soft, easy drink"
ANDREW GARRETT Brut NV Pinot Noir Chardonnay	12.90	Australia	220, 300	15	Rose colour; toffee/yeasty nose with some strawberry aroma; sweet lolly/berry fruit palate — "pleasant, but not a standout"
FLEUR DE LYS Vintage Chardonnay Pinot Noir 1993	13.45	Australia	220	15	Mid yellow-gold colour; confectionery/lolly/honey aromas; sweet palate with a slightly developed bitter flavour — "too simple, too green"
RICHMOND GROVE Chardonnay Pinot Noir	11.15	Australia	220, 300	15	Light straw colour; smoky/meaty nose with a brandy-like aroma; coarse, lean, lemony palate, sweet and sour — "fairly average quality"
YELLOWGLEN Pinot Noir Chardonnay	15.50	Australia	220, 300	15	Light straw colour; floral, tropical aromas with a touch of toast; green, herbaceous palate, some fruit flavour — "too young and simple"
DEUTZ Marlborough Cuvée	20.50	New Zealand	220, 300	14.5	Yellow colour; smoky, beefy aromas with a touch of Vegemite; tight, hard, acidic palate with leafy/pine needles flavour — "sweet and sour wine"
YALUMBA Cuvée One Prestige Pinot Noir Chardonnay	15.80	Australia	220	14.5	Mid yellow-bronze colour; honey/toasty/yeasty aromas; stripped, lean, green palate, hot in style — "too acidic, lacks balance"
GRANDIN Méthode Traditionnelle Brut	14.00	France	220, 300	14	Straw colour; smoky cigar-butt nose with a cardboard aroma; coarse, oily, musty palate with some sweetness — "lacks elegance"
MORE THAN $20					
★ **CHARLES HEIDSIECK** Champagne Brut Reserve 1994	58.00	France	220, 300	17.5	Deep straw colour; aged nose, mushroom/smoky aromas; rich palate with long fruit flavours, slightly sweet and toasty — "classic characteristics"
★ **LOUIS ROEDERER** Cristal Champagne Brut 1990	186.25	France	220	17	Aged straw colour; bready/toasty nose with apple and aniseed aromas; strong palate with rich, sweet, over-the-top flavours — "full-bodied style"
★ **SIR JAMES** Vintage 1994	21.00	Australia	220, 300	17	Deep straw colour; very toasty, developed nose, some smoky-bacon aromas; full, rich, creamy palate, toasty style — "very big flavour"
★ **TAITTINGER** Champagne Brut Reserve	58.15	France	220, 300	17	Mid-straw colour; strong yeasty nose, slightly herbaceous aroma; sweet, creamy, apple palate, good length and balance — "great character and depth"
★ **VEUVE CLICQUOT PONSARDIN** Champagne Vintage Reserve 1990	66.95	France	220	17	Yellow-gold colour; developed, aldehydic nose with rich toasty aromas; full-flavoured, big-style palate — "stylish, bready, long"
BOLLINGER Champagne Special Cuvée Brut	66.00	France	220	16.5	Light straw colour; toasty/bready/woody nose with some sherry and fruit aromas; sweet, rich palate, some apple flavour — "big style, long flavour"
DOM PERIGNON Champagne Vintage 1990	164.55	France	220	16.5	Yellow colour; toasty/mushroom nose with burnt matches/malt biscuit aromas; aged palate with sweet/mushroom flavours — "a little too developed"
LOUIS ROEDERER Champagne Brut Premier	56.55	France	220	16.5	Light straw colour; rainforest/leafy/earthy nose; lively, zingy, acidic palate, some sweet and apple flavours — "green and raw"
MOËT & CHANDON Champagne Brut Impérial 1992 Vintage	76.65	France	220	16.5	Yellow-green colour; cheesy/fruity nose with some yeasty/toasty aromas; sweet palate, clean, fresh and short — "easy to drink"
MOËT & CHANDON Champagne Brut Impérial	59.85	France	220	16.5	Light straw colour; smoky/gunpowder nose, some herbaceous/lemongrass aromas; long palate, slightly sweet — "has length and lingers"
VEUVE CLICQUOT PONSARDIN Champagne Brut	62.00	France	220	16.5	Light straw colour; woody, developed nose with nutty/dusty aromas; creamy, nutty palate with some hot, acidic, citrus flavours — "very sweet and sour"
BOLLINGER Grande Année Champagne Brut Vintage 1990	95.25	France	220	16	Deep straw colour; sweet confectionery nose with apple/biscuity aromas; big, bready palate, lots of flavour, slightly sweet — "a little overworked"
DOMAINE CHANDON Cuvée Riche Pinot Noir, Chardonnay & Pinot Meunier	29.10	Australia	220	16	Apricot colour; musty/smoky nose with with a strawberry aroma; developed palate, sweet, luscious and creamy — "great for cheese and dessert"
LAURENT-PERRIER Champagne Brut LP	55.75	France	220	16	Light straw colour; warm nose, toasty/smoky aromas; tight and simple palate, strong pencil flavours — "verging on a bit harsh"
PIPER-HEIDSIECK Champagne Brut	44.35	France	220, 300	16	Light straw colour; burnt matches and slightly herbaceous aromas; creamy palate with cheesy/nutty/sweet flavours — "too youthful and bitter"
JANSZ Tasmania Brut Cuvée 94	30.20	Australia	220	15.5	Light straw colour; sweet, creamy nose with some dusty/bready aromas; zesty sweet and sour palate, slightly herbaceous — "attractive but green"
KRUG Champagne Brut Grande Cuvée	161.65	France	220	15.5	Mid yellow-gold colour; oxidised, aldehydic, old-barrel nose; sweet palate with some creamy/grassy flavours — "oxidised, developed style"
SALINGER Méthode Champenoise 1992	23.00	Australia	220, 300	15.5	Straw colour; smoky, aged mushroom nose with some lemongrass; very rich palate with sweet/herbal flavours — "disappointing for this bracket"
YALUMBA D Méthode Champenoise Vintage 1995	25.70	Australia	220	15.5	Pale straw colour; young, herbal nose; upfront, full-bodied palate with some salty/lemongrass flavours, short and drops away — "austere"
CROSER 1996	32.65	Australia	None	15	Light straw colour; young, herbal nose, slightly volatile with some citrus aroma; simple palate, green, hard and sweet — "lacks character and depth"
MIXED EMOTIONS — WHERE THE EXPERTS DIFFERED **					
$10 TO $20					
YELLOWGLEN Vintage 1995 Brut	19.50	Australia	220, 300	15–18.5	Medium straw colour; toasty/bready/yeasty nose, slightly sweaty; creamy, toasty, full palate — "fuller-bodied style"
SIR JAMES Cuvée Brut Pinot Noir Chardonnay	13.05	Australia	220, 300	14.5–18	Developed golden bronze colour; smoky/gunpowder nose with toasty aromas; big-style palate with toasty/cheesy flavours — "generous flavours"
MORE THAN $20					
DOMAINE CHANDON Vintage Brut 1995 Pinot Noir, Chardonnay & Pinot Meunier	29.05	Australia	220	14.5–18	Slight bronze colour; simple nose, some lemon aroma; sweet, rich, upfront palate with strawberry/fruity flavours — "very commercial"
POL ROGER Brut Champagne	54.00	France	220, 300	14.5–18	Bronze colour; wet wool/yeasty/toasty/sweaty aromas; warm, creamy palate with some sweet cheesy/nutty flavours — "champagne!"

* Prices shown are based on nationwide checks in October 1998. Wines fitted into our price ranges when we bought them; some may now be slightly more expensive.

** See *It's not so black and white*, page 10, for an explanation of *Mixed Emotions*.

CHOICE's end-of-year present-ation!

The festive season is upon us once again, which means shopping for presents, holidays, parties, Christmas dinner and, in the New Year, sales. Use our compilation of the available top performers and Best Buys from our tests over the past year to make the most of your money. And don't forget to look at the test reports in this issue — see champagnes and sparkling wines on page 8, portable sun shelters (page 21), mini-stereo systems (page 43), water-saving shower heads (page 36); and, to capture those festive moments, both compact and single-use cameras, starting on page 28.

■ For more information about the tests we did, product features and what to look for when buying, refer to the original article.

■ Technology in electronic products such as VCRs, TVs, printers and mobile phones changes constantly and there's a fast turnover of models. This means many of the models we tested aren't available now, and you'll find new models on the shelves that we haven't tested. Where we recommend models for these products, it means we think you'll still be satisfied with their performance, though they may not have the very latest features or technology.

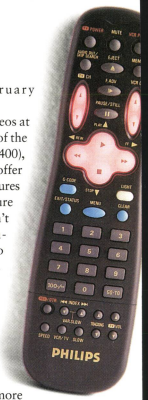
■ Prices given are a good target to aim for when shopping around. Some are recommended retail prices, others are based on nationwide price checks made between August and November 1998.

ENTERTAINME

VCRs

(January/February 1998)

We looked at videos at the cheaper end of the market ($350 to $400), and found they offer lots of useful features and a good picture — and you don't need an engineering degree to program them. For this price you don't get hifi-quality sound, though, so if you're after the home theatre experience you'll have to go for a more upmarket hifi video.



The Philips VR457's remote control can light up in the dark.

The features offered on VCRs are constantly evolving, and almost all those we tested have been superseded by new models — see CHOICE, Jan/Feb 1998, for more on what features are on offer. The **PHILIPS VR457** scored well overall, with the **PANASONIC** only a couple of points behind. However, the **PANASONIC** doesn't have a long-play option, so if you want this feature you'd be better off with the **PHILIPS**.

WHAT TO BUY

PHILIPS VR457	$399
PANASONIC NV-SD270A	$379

Multidisc CD players

(March 1998)

It's at dinners, parties and other social occasions that multidisc CD players really come into their own — just bung in a selection of your favourite CDs, press play and forget about the music for a good few hours.

We tested players that hold from five to 26 CDs, depending on the model. We found that loading and unloading discs onto a carousel, rather than into a cartridge or rack, was more convenient, although you're limited to five CDs. They all sounded good, but the SONY scored well across the other measures too: features available, ease of use and programming. (See the article in CHOICE, March 1998, for more on features to look for.)

WHAT TO BUY

SONY CDP-CE315	$379

Sony CDP-CE315

TVs

(May 1998)

With digital TV looming on the horizon, should you put off buying a current analogue model and wait for it? Probably not — even when digital TV does arrive, analogue broadcasts will continue for a further 10 to 15 years.

While TVs may look pretty alike these days, we nevertheless found big differences in picture quality and sound among 51 cm televisions. We tested 16 for picture quality, sound and ease of use, and the three in the *What to buy* list scored reasonably well in all measures.

WHAT TO BUY

SONY KV-G21S2	$699
AKAI CT-21W9AT	$595
JVC AV-G21AU	$599

DIY

Ladders

(December 1997)

When we tested ladders earlier last year, we were very concerned about their safety, and over half weren't recommended for use. However, by the time of our December update test, the manufacturers had responded to our concerns and implemented simple but effective changes, making them much safer.

WHAT TO BUY

■ **Stepladders** (in alphabetical order)

OLDFIELDS Pro Series PS6	$206
OLDFIELDS SM6 (metal spreaders)	$131
OLDFIELDS TS6 (metal spreaders)	$181
WELBILT PS6 Domestic Step	$114
WELBILT SL6 Industrial Step	$156

■ **Step-extension ladders** (in alphabetical order)

BAILEY Comet 6' FS20256	$170
BAILEY FS20259	$220
OLDFIELDS TDP6	$249
WELBILT DP6 Dual Purpose Step	$187

■ **Multi-purpose ladder**

OLDFIELDS TMP13	$354

Electric sanders

(August 1998)

We tested a range of electric sanders for removing timber, removing paint, performance in corners, performance on louvres and the smoothness of the finish.

WHAT TO BUY

■ **1/3-sheet sanders** are easy to guide, good for large areas and reasonable in corners, but they don't remove large amounts of material.

MAKITA 9035	$119
RYOBI HS 35	$89

■ **Delta-head sanders** are good for smaller, more intricate jobs (with corners and crevices), although they're not particularly easy to control.

BOSCH PDA 240 E	$179

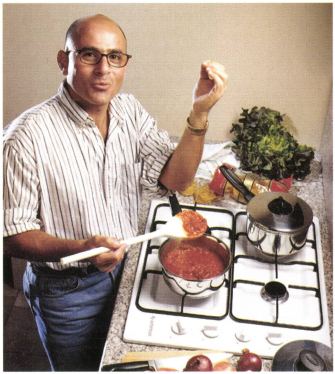
■ **Random orbital sanders** are best for large surfaces that need a lot of material removed — they're not much good in corners or on detailed work.

BOSCH PEX 12 AE	$149

■ **Multi-purpose sanders** offer versatility and compromise — they have a rectangular base for moving over large areas quickly, with a delta tip at one end for more detailed work. The **BLACK & DECKER** also comes with a random orbital head; although it was better than the dedicated 1/3-sheet and delta-head sanders at removing material, it wasn't as good as a regular random orbital sander.

BLACK & DECKER KA220E	$149

KITCHEN



Saucepans

(January/February 1998)

A good saucepan is durable, safe and easy to use, and cooks well — heats evenly and efficiently, without food sticking to the bottom.

We tested 20 of the most widely available two-litre saucepans for cooking performance, durability, ease of use and safety. They were made of a range of metals, from the old favourite, stainless steel, to some of the new-generation non-stick materials, but no one material stood out as best.

THE BEST

equal	**FISSLER Coronal Cookstar**	$185
equal	**TEFAL Armatal (A)**	$100
equal	**BISTRO Classic**	$60
equal	**DAVID JONES**	$80
equal	**SCANPAN 2001+ 17115 (A) (B)**	$149

(A) Non-stick.
(B) The manufacturer of the saucepan tells us the non-stick surface of this saucepan has been changed since we tested it.

GOOD VALUE

FINEMARK Vitesse CK443	$45
PREMIUM (Big W)	$37

Cooktops

(January/February 1998)

Manufacturers of gas stoves have responded to an increased interest in Asian foods by marketing cooktops designed for wok cooking. We tested 10 gas cooktops that had a high-heat burner with a trivet for a round-based wok, ideal for stir-frying.

Using a thermal imaging camera, we found that wok burners heat a wok more evenly than regular burners. Those with the highest heat output produced the best stir-fries in our cooking tests. The downside is that you may not be able use the trivet for pans other than woks — generally manufacturers recommend you don't, so you might be better off with a regular stove if you don't use a wok very often.

The cooktops in our *What to buy* list all performed well in our cooking tests, but the AEG and WHIRLPOOL weren't considered as good as the others for ease of use. See *Cooking with gas* in CHOICE, Jan/Feb 1998, for more on the pros and cons of each cooktop.

WHAT TO BUY

	SIMPSON 72C315*	$599
	SMEG SAR134	$659
	WHIRLPOOL 6WOKGC	$499
equal	**AEG 32590G**	$749
equal	**WESTINGHOUSE GHF17****	$599
	ILVE IV360C	$849

* The model we tested was the 72B315. The manufacturer tells us the only difference between the old and new model is the control knobs.
** This model has been superseded (by the GHH17, with a recommended retail price of $639), but you may still find it in stores. The manufacturer tells us the only difference between the old and new model is the control knobs.

Finemark Vitesse CK443

Two-drawer dishwasher

(July 1998)

Festivities inevitably mean piles of dishes and glasses to be washed, and it's in these situations that a dishwasher proves very convenient. And FISHER & PAYKEL's recent innovation — a dishwasher with two drawers — adds versatility to convenience. The two drawers operate independently, so you can use either or both — for example, washing a load of glasses quickly in one drawer while you're filling up the other.

In our tests, it performed reasonably well overall, and very well for ease of use. The only downside is its relatively high cost. See the test report in CHOICE, July 1998, for more on this machine and how it compares with others we've tested.

WHAT TO BUY

FISHER & PAYKEL DishDrawer DD601	$1599

Woks

(June 1998)
If you don't have a gas stove with a special wok burner (see *Cooktops*, left), you may be better off using a flat-bottomed wok to take advantage of the wonders of Asian cuisine.

We tested 14 flat-bottomed woks, and while most performed differently on gas and electric stoves, the **MEYER Anolon** cooked the best on both. We also tested two electric woks, and both rated well — but only the **BREVILLE** is still available.

WHAT TO BUY

■ For electric and gas stoves

MEYER Anolon 81146AP	$145

■ For gas stoves only

CHIEF	$75
TARGET	$69

■ Good value for both electric and gas stoves

TASTE OF CHINA Professional TOC008	$30

■ Electric wok

BREVILLE EW10	$129

Fridges

(March and November 1998)
Is your fridge struggling to keep the beer cold enough? Or maybe the gurgles and clunks are drowning out the party music. This year we did two tests of fridges: 500 L (March) and 400 L (November). In both tests, the new-generation electronic fridges came out top.

Although electronically controlled features differ from model to model, they can include management of temperature sensing and setting, a 24-hour memory that monitors door openings and precools the fridge before a period of heavy use, and a warning beep if you leave the door open for too long.

WHAT TO BUY

■ 500 L fridges

WESTINGHOUSE BJ505S Mastermind (electronic, freezer on bottom)	$1595
HOOVER HE505UF (A) (freezer on bottom)	$1499
KELVINATOR C500D Impression Series (freezer on top)	$1099
HOOVER HE513TF (A) (freezer on top)	$1499
KELVINATOR N500BD Impression Series (freezer on top)	$1399
SAMSUNG SR-V57 Cool Tech (B) (freezer on top)	$1395

(A) The models we tested were the Hoover HE505UF Contour and HE513TF Contour respectively. The manufacturer tells us the fan has been changed on both since we tested them.
(B) The manufacturer tells us the door has been changed on this model since we tested it (the main change is to the handle).

■ 400 L fridges (all electronic)

FISHER & PAYKEL Active Smart E440T (freezer on top)	$1399
WESTINGHOUSE Mastermind BJ425S (freezer on bottom)	$1399
FISHER & PAYKEL Active Smart E442B (freezer on bottom)	$1399

BABY PRODUCTS

Baby carriers

(June 1998)
Baby carriers are a convenient 'hands-free' baby-transport option, and provide a useful alternative to prams and strollers. But when you're buying one, take the recommended age and weight with a grain of salt: we found that among the nine we tested, most would be useful for babies only up to six to eight months old, and some weren't suitable for newborns.

While none of the carriers was ideal, the **BABY BJÖRN** and the **NURSING MOTHERS' ASSOCIATION** baby slings were fine for most newborns, although there were limitations for older babies — read the article in CHOICE, June 1998, before you buy a baby carrier.

WHAT TO BUY

BABY BJÖRN Baby Carrier	$90
NURSING MOTHERS' ASSOCIATION Clip-on Baby Sling BEST BUY	$30

HOUSEHOLD

Washing machines

(September 1998)

We've often found, when testing washing machines, that they don't perform at their best when filled to their claimed capacity. Nor are most people likely to stuff them as full as manufacturers seem to think. Which begs the question: why don't washing machine manufacturers make the claimed capacities of washing machines more realistic?

In the latest round of testing, we identified one possible reason why they don't: energy efficiency ratings. Take, for example, the **HOOVER Boss** machines — the **2300 L**, **2305 L** and **2307 L** models. Their claimed capacities are 6.5, 7 and 7.5 kg respectively, but in fact their drum size is identical, and (assuming you put an identical load of clothes in each machine) so is their real energy *consumption*. But guess which has the greatest energy *efficiency* rating — and therefore a marketing edge? The 7.5 kg model — because, in short, although you're using the same amount of energy per wash, you're supposedly washing more clothes in each load, therefore requiring fewer washes over time and so using less energy in the long term. In practice, we suspect, you'll put exactly the same amount of washing in each of them, based on the size of the drum — so you won't get the energy efficiency the label leads you to believe.

Nevertheless, all three models performed well, and we've recommended them as **Best Buys** for large top loaders — but since they're all the same size, just buy whichever is cheapest.

WHAT TO BUY

■ Front loaders

ARISTON AL1046T	$1295
BENDIX WMN 842B	$1195

■ Top loaders 6.5–7.5 kg

HOOVER Boss 2300L / 2305L / 2307L	$799-849

If a punkah wallah is out of your league, maybe a ceiling fan could provide some relief from the heat.

Heat lamps

(April 1998)

Those cold winter mornings stepping out of the shower probably seem a long way off right now, but there's no harm in preparing early. Heat lamps are the most popular option for bathroom heating these days but, depending on your bathroom, may not be the best one.

We tested two- and four-globe models that combine heat lamps, an exhaust fan and a light. We found the heat is very concentrated on your head and shoulders, and you have to stand right under it to feel the benefits. While this may suit some people, make sure you read *Heating your head?*, CHOICE, April 1998, for more on the pros and cons of heatlamps before you buy.

WHAT TO BUY

■ Model with two 275 W globes

KAMBROOK Trio CX15	$99

■ Model with two 375 W globes

IXL TASTIC Triumph 11312	$149

■ Model with four 275 W globes

IXL TASTIC Sensation 12303	$219

■ Model with four 375 W globes

IXL TASTIC Silhouette 12301	$239

Ceiling fans

(October 1998)

If the summer heat is getting to you by now, don't despair — salvation could be at hand, cheaply and effectively, in the form of a ceiling fan. We put 16 fans with wooden or metal blades to the test, and found that those with wooden blades were best suited to bedrooms, and metal blades to living rooms.

WHAT TO BUY

■ Wooden blades for bedrooms

The wooden fans we tested had flat blades, providing relatively low — and therefore quieter — air movement on their lowest setting.

equal

CASABLANCA Delta 6910	$69
CASABLANCA Delta 6930 (A)	$79
CASABLANCA Delta 6940 (B)	$79
MARTEC Premier Series MPM 1204W (optional ball-joint mounting: $15)	$59
CASABLANCA Delta 6980	$122
FOUR SEASONS FSM 1204W (optional ball-joint mounting: $15)	$65

(A) The same as the 6910 but has an oyster light fitted.
(B) The same as the 6910 but has a clipper light fitted.

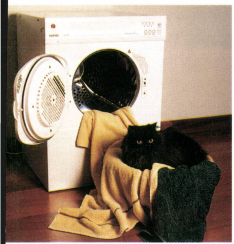
■ Metal blades for living rooms

The blades on these fans are shaped for maximum air movement, so the air they move covers a larger area on their highest setting and they're somewhat noisier than fans with wooden blades — fine for a living area, but probably too noisy if you're trying to sleep.

equal

MISTRAL 1341-0	$87
MISTRAL 1380-0 (C)	$89
WATTMASTER KA48PL	$79

(C) The same as the 1341-0 but has an oyster light fitted.



Tumble dryers

(August 1998)

In our latest test of tumble dryers we looked at how easy it is to get to and clean the filter (which you have to do every time you use it), and at drying speed and energy efficiency.

The **SIMPSON Sirocco 500** got top marks for drying time and energy efficiency, but the filter was difficult to get at. The **HOOVER 5010D** (now called **5030D**), which was also good for energy efficiency, didn't rate well for drying speed but the filter was easy to clean.

WHAT TO BUY

HOOVER 5030D	$399
SIMPSON Sirocco 500	$389

Vacuum cleaners

(July 1998)

When it comes to the post-party clean-up, you want a vacuum cleaner that's up to the job.

We tested three uprights, nine barrels and one canister at the cheaper end of the market. The **HOOVER U1432 Breeze** upright was the clear winner for dirt removal and best overall. Among the barrels, the **HOOVER 1250SOAUS** and **PHILIPS HR 8331** were best for dirt removal, although they only removed half as much dirt in our test as the **HOOVER** upright.

WHAT TO BUY

■ **Upright model**	
HOOVER U1432 Breeze	$179
■ **Barrel models**	
HOOVER 1250SOAUS	$179
PHILIPS HR 8331 Expression	$179

IT AND COMMUNICATIONS

Mobile phones

(January/February 1998)

As annoying to others as they are useful to their owners, mobile phones are here to stay.

We reported on a test of 16 digital mobile phones, but the technology is advancing rapidly and nearly all the models tested have since been superseded. The **ALCATEL** was rated best overall, and the **PHILIPS** was also a high scorer.

You're more likely to buy a mobile phone as part of a call plan, so we haven't listed any prices. You'll also have to make sure both the phone and call plan meet your needs and, when choosing your carrier, check that it covers the areas where you want to use the phone.

WHAT TO BUY

ALCATEL HD1 One touch easy

PHILIPS diga

Alcatel HD1 One Touch Easy

Answering machines

(May 1998)

Nowadays you can buy a digital answering machine for around the same price as a single or dual-tape machine, but digital is more convenient.

We tested machines priced from $50 to $100, and found they were all acceptable in terms of message clarity — the main difference lay in their features. See the article in CHOICE, May 1998, for more on what features to look for.

WHAT TO BUY

GE FA2-9866A (digital)	$60
DSE F-8011 (digital)	$90
TELSTRA Monitor 300 (single microcassette)	$79
TELSTRA Monitor 310 (single microcassette)	$99

Hewlett Packard DeskJet 720C

Printers

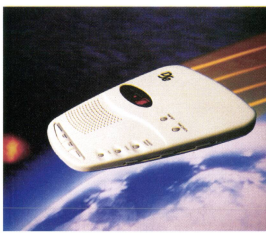
(July 1998)

Let's face it — when it comes to print quality and speed, dot matrix printers just don't cut the mustard. If you're ready to try your hand at designing your own greeting cards or invitations and want a good colour printer, you can't go past a colour inkjet. However, if you're more interested in a printer for a home-office environment, a laser printer could be the way to go.

After testing eight laser printers and 12 colour inkjets, we found that, generally speaking, laser printers are great for printing pages of text fast. However, the colour inkjets print better grey-tone images, are cheaper and also offer the option of colour printing. Of those we tested, most have been superseded; only these two from our *What to buy* list are still available.

WHAT TO BUY

■ **Colour inkjet**	
HEWLETT PACKARD DeskJet 720C	$549
■ **Laser**	
KYOCERA Ecosys FS-600	$690



LEISURE

Camping mattresses

(November 1998)

Planning a camping trip? Likely to be short of beds with guests staying? A self-inflating mattress could be just what you need. Although relatively new on the market compared with air mattresses and foam mats, self-inflating mattresses are currently the most popular form of portable bedding.

We tested 13 mattresses in two thicknesses — 2.5 cm and 5 cm — for comfort, drying time and durability. We also measured their weight and volume when rolled up — important considerations when you're hiking. Although the 5 cm mattresses are more comfortable to lie on, their weight and bulk means they're probably better suited for car-camping. Even for that, some roll up much smaller than others — check when you buy.

WHAT TO BUY

■ 2.5 cm thickness

DMH Maxi-lite, Long Non-slip D16	$90
EARTH MAT Lightweight Long	$99

If compact size and light weight are a priority:

THERM-A-REST Litefoam Ultra Long	$139

■ 5 cm thickness

THERM-A-REST Staytek Camp Rest Long	$175
DMH D18 Jumbo Camper Deluxe	$145
NOMAD NOSIM72202V	$99
ARTIACH Deluxe Long	$150

equal

Lipstick

(September 1998)

You're almost guaranteed to come across some mistletoe in the next month or so — but do you really want to leave your mark?

We put 15 so-called long-lasting (or long-wearing) lipsticks to the test and found that, while some were pretty good — including one for under $10 — none was durable enough to survive eating and drinking. **MAYBELLINE Great Wear Budgeproof Lipcolor** was judged best for durability, but it didn't feel as good on the lips as some of the others, so wasn't on our *What to buy* list.

WHAT TO BUY

MAX FACTOR Ultra Lasting Colour	$17
REVLON Colorstay Lipcolor	$18
ESTEE LAUDER Indelible	$30
AUSTRALIS Stay Put (BEST BUY)	$9

equal

Corkscrews

(December 1997)

The coming festive season means you'll probably be giving your corkscrew a bit of a workout. But is it up to the job, or could you do with a better one?

We tested 11 corkscrews and two cork extractors, and found that no single design guarantees good performance. Our recommended buys included a single-lever (or 'waiter's friend') style of opener, two continuous-screw corkscrews and a wing-lever corkscrew. But similar-style openers of other brands didn't necessarily work as well — individual design factors seem to make the difference.

Argyle Waiter's Friend

Brabantia Corkscrew

Monopol Wing Lever

Zyliss Corkscrew

WHAT TO BUY

ARGYLE Waiter's Friend	$12
BRABANTIA Corkscrew	$28
MONOPOL Wing Lever	$22
ZYLISS Corkscrew	$30

equal

Prices shown are from December 1997.

TEST REPORT

Sheltered *from the* sun?

You want protection from the sun while relaxing in the garden, and a sun shelter could be just the ticket. Which ones offer that protection ***and*** *last more than a season or two?*

BACKYARD SUN SHELTERS HAVE been around for a while, but have grown in popularity over the last three or four years, probably because of increased awareness of the dangers of exposure to UV radiation.

They come in different shapes (square, rectangular or hexagonal) and sizes, ranging from small ones for children (less than 2 m square) to models claimed to be "large enough for 12 people to dine under in style". They consist basically of a frame, which you have to put together, and a cover for the top. Some also have a detachable side panel for blocking out more sun or wind.

For this test we bought sun shelters (they're often called gazebos too), ranging in price from $59 to $549, and suitable for a group of people to sit under.

Protection from the sun?

How much protection a sun shelter provides from UV radiation is hard to tell. Looking at or feeling the fabric won't tell you.

Manufacturers' claims such as "designed to give you all day protection", "100% protection" or "provides UV protection" are meaningless or even misleading, as they could give a false sense of security about the level of protection you'll get.

If you're only interested in a bit of shade that'll keep you cooler, all the models we tested provide that. But for better protection from UV radiation combined with good durability, only the models in the *What to buy* list fit the bill.

WHAT TO BUY

SHELTA Original Shadehouse	$485
SHELTA Ultimate Shadehouse	$549

While portable sun shelters are available for less than $100, you'll have to spend several hundred to get a good one. The lower-priced models we tested either provided little protection from the sun or scored poorly for durability.

Of the 12 in our test, only the two **SHELTA** models give good enough UV protection *and* good resistance to UV degradation — so they should last for some years. They're also fairly easy to assemble and to use.

But they're expensive — and they do have one fault: they're heavy and don't come with a carry or storage bag. This is a major oversight, we think, considering that all the other — cheaper — models we tested included such a bag. It not only makes transporting the shelter easier, but also helps you keep the many pieces together while not in use. You can reuse the box the shelter comes in, but it's clumsy to carry and sooner or later will fall apart.

IN BRIEF

- **Many backyard sun shelters provide little protection from the sun's harmful ultraviolet (UV) rays, and many are likely to fall apart after just a couple of seasons. See page 25 for our UV protection and durability test results.**
- **If you want to take your sun shelter to events outside your backyard, some are more portable than others — see page 24.**

Protecting yourself

Don't just rely on the shade a sun shelter provides. To reduce the harmful effects of the sun's UV radiation, you should also:

- **Minimise your exposure, especially between 11 am and 3 pm (daylight saving time) or 10 am to 2 pm (standard time), when the sun is strongest.**
- **Wear a wide-brimmed hat, sunglasses that meet the Australian standard and protective clothing (long-sleeved shirt and long trousers made from tightly woven fabric).**
- **Apply a broad-spectrum SPF15+ sunscreen to the unprotected areas of your body.**

WHAT TO LOOK FOR

We found poor quality control on a number of the sun shelters — for example, loops too short to reach the pegs on the Rayburn Gazebo SKU#819778.

You can't check durability or UV protection in the shop, but you can consider the following aspects.

Size

- The measurements stated on the box usually give the base area only. But that doesn't tell you about space and headroom — the size of the canopy, the height and the slope of the sides can vary considerably between models of the same base size. It's best to look at models fully erected on the shop floor.

Portability

- If you want to be able to carry it around, it should be lightweight and have a strong carry bag, preferably with a comfortable shoulder strap (see ... *taking it with you* ... on page 24 for more on this). It's also useful for keeping all the pieces together while you're not using it.

Cover fabric

- A cover made of knitted shadecloth allows better air circulation than some other fabrics and may keep you a little cooler but in our test this kind of fabric didn't give such good UV protection.
- If it's made from heavier fabric, check whether it has a vent in the roof to help keep the temperature down on really hot days.
- Avoid covers made of polyethylene — the two models tested with covers of this material provided very little protection from UV light and lost a lot of strength in our durability tests.
- Light-coloured shelters generally keep you cooler than darker colours.
- Check the quality of the stitching — it should be reinforced at the corners and other stress points.

PROFILES

Profiles are of the models in the table that didn't earn the 'not recommended' label, in rank order by UPF. Prices

SHELTA Original Shadehouse

Target price: $485

Good points

- Best UV protection.
- Very good durability.
- Waterproof.
- Good usable area.
- Reasonably stable.
- Fairly easy to assemble.
- Good instructions.
- Air vent in top of canopy.
- Optional side panel.

Bad points

- No carry bag, and one of the heaviest in the test.
- Some frame parts were hard to pull apart during testing.
- Plastic pegs — one broke during our tests.
- Expensive.

SHELTA Ultimate Shadehouse

Target price: $549

Good points

- Best UV protection.
- Very good durability.
- Waterproof.
- Very good usable area, with excellent headroom all round.
- Reasonably stable.
- Fairly easy to assemble.
- Good instructions.
- Air vent in top of canopy.
- Optional side panel.

Bad points

- No carry bag, and one of the heaviest in the test.
- Some frame parts were hard to pull apart during testing.
- Plastic pegs.
- Very expensive.

SUMMIT Shade Shelter Deluxe

Target price: $259

Good points

- Very good usable area.
- Waterproof.
- Air vent in top of canopy.
- Side panel and guy ropes supplied.

Bad points

- A UPF of 16 still gives protection, but it's not nearly as good as the **SHELTA**s.
- Poorer durability than the **SHELTA**s.
- Heaviest model tested — and there's no shoulder strap on the carry bag.
- Slow to erect — has many similar frame components, which can be confusing during assembly.
- Not particularly stable, although the guy ropes help.
- Poor instructions.
- Springs securing frame pieces tended to jam/stick.

Frame and assembly

- The frame should be strong but not heavy. Aluminium is lighter than steel and won't rust.
- Look for a model that doesn't have too many frame components, or too many of different sizes. You'll generally find that the larger and fancier the shelter, the longer it'll take to set it up.
- Pegs should be long and strong.

Accessories

- A side panel that can be attached to one side of the shelter is useful for blocking out more sun or wind. With some models it's included; for some others you can buy one separately.
- Guy ropes are useful for steadying the shelter in windy conditions.
- If you want protection from flying insects, look for a model with full mosquito screening.

UPF and UV radiation

The ultraviolet protection factor (UPF) is a measure based on the amount of ultraviolet (UV) radiation that passes through a material; it's an indication of its protective ability. So the less UV that gets through, the higher the UPF.

The figures below give you a rough indication of the level of protection a UPF range provides. They're from the Australian standard for clothing fabrics. With a sun shelter, however, many other factors are likely to reduce the level of protection: the time of day and year; the amount of cloud cover; the level of reflected UV radiation and the amount entering from the open sides; and your skin type.

UPF range	UV radiation transmitted (%)	UVR protection category
15 to 24	4.2 to 6.7	Good protection
25 to 39	2.6 to 4.1	Very good protection
40 to 50, 50+	< 2.5	Excellent protection

a good target to aim for when shopping around, based on nationwide checks in October 1998. Anything lower is a bargain.

ENVIROSHADE Gazebo*

Target price: $279

Good points

- Excellent durability.
- Very good usable area, with excellent headroom all round.
- Reasonably stable.
- Open-weave material should help air movement to cool you down.
- Side panel supplied, waterproof cover optional.

Bad points

- UV protection not good enough.
- Fairly heavy.
- Has many similar frame components, which can be confusing during assembly; it was slow to put up.
- Poor instructions.
- On the model we tested, the loops for pegging the shelter down were missing, and two frame components became stuck together and couldn't be separated.

ENVIROSHADE Portashade*

Target price: $129

Good points

- Excellent durability.
- Reasonably stable.
- Open-weave material should help air movement to cool you down.
- Optional side panel and waterproof cover.
- The lightest and easy to carry.
- The easiest and quickest to assemble.

Bad points

- UV protection not good enough.
- Less headroom than most other models due to greater slope on the sides and smaller canopy area.

ENVIROSHADE Summer Breeze*

Target price: $239

Good points

- Excellent durability.
- Very good usable area.
- Reasonably stable.
- The only model in the test that had no quality control problems.
- Open-weave material should help air movement to cool you down.
- Optional side panel and waterproof cover.

Bad points

- UV protection not good enough.
- Scored comparatively poorly for ease of assembly — we found it difficult to attach the fabric to the frame, though this should improve over time as the fabric stretches.

*These models are now called Coolaroo Gazebos — see the footnotes to the table, overleaf, for details.

Brand / model (in rank order by UPF *)	Manufacturer / distributor	Origin	Target price ($) **	Warranty (years)	Shape of floor plan	Type of materia
SHELTA Original Shadehouse **(A)**	Shelta Umbrellas	Australia	485	**(G)**	Hexagonal	Olefin
SHELTA Ultimate Shadehouse **(B)**	Shelta Umbrellas	Australia	549	**(G)**	Extended hexagonal	Olefin
SUMMIT Shade Shelter Deluxe **(C)**	Hartman Pacific	ns	259	ns	Square	Canvas
ENVIROSHADE Gazebo **(D)**	Gale Pacific	China **(F)**	279	5 **(H)**	Square	Knitted shadeclot
ENVIROSHADE Portashade **(D)**	Gale Pacific	China **(F)**	129	5 **(H)**	Rectangular	Knitted shadeclot
ENVIROSHADE Summer Breeze **(D)**	Gale Pacific	China **(F)**	239	5 **(H)**	Rectangular	Knitted shadeclot
NOT RECOMMENDED due to poor durability score. Some also suffered from other problems that affect the integrity or long-term use of the product.						
SUMMIT Shade Shelter	Hartman Pacific	China	199	1	Square	Polyester
RAYBURN Gazebo SKU#819778 **(C) (E)**	BBC Hardware / Hardwarehouse	China	99	ns **(J)**	Square	Polyester
TIMBERLINE Gazebo	Big W Discount Stores	China	98	ns **(K)**	Square	Polyester
RAYBURN Gazebo SKU#156354 **(E)**	BBC Hardware / Hardwarehouse	China	159	ns **(J)**	Square	Polyester
RAYBURN Sun Shelter SKU#819809 **(C) (E)**	BBC Hardware / Hardwarehouse	China	59	ns **(J)**	Rectangular	Polyethylene
RAYBURN Gazebo SKU#673734 **(E)**	BBC Hardware / Hardwarehouse	China	69	ns **(J)**	Square	Polyethylene

* UPF = ultraviolet protection factor — see page 23 for details.

** Prices shown are good target to aim for when shopping around, based on nationwide checks in October 1998.

ns Not stated

(A) The name has changed; the model we tested was called The Shadehouse.

(B) The name has changed; the model we tested was called Ultra Shadehouse.

(C) This model has been discontinued, but you may still find it in shops.

(D) The Enviroshade shelters are now all called Coolaroo Gazebos. They have no model names and are distinguished by their sizes. Prices quoted are for the Enviroshade models.

(E) The Rayburn model names don't appear on the packaging, but the SKU numbers do. These models are sold only through BBC Hardware and Hardwarehouse, so you shouldn't have any problems distinguishing one from another.

(F) Australian fabric, assembled in China.

(G) Five years on the frame, two years on the cover.

(H) Against UV degradation of the fabric only.

Skin cancer facts

- **Two out of three people who live in Australia all their lives will get some kind of skin cancer.**
- **Around 900 people in Australia die each year of melanoma, the less common but more serious type of skin cancer.**
- **The most common cause of skin cancer is exposure to UV radiation, so appropriate protection can help you avoid getting skin cancer.**

Putting it up ...

Portable sun shelters aren't designed to withstand strong winds. Most instructions warn you to take the shelter down in such conditions, and whenever it's not in use. This means you'll probably have to put up and take down the shelter more frequently than just once a season. Here's what you're in for.

Erecting one of these is a bit like a jigsaw puzzle. You have to sort all the frame parts by size, and then work out which parts fit together. That done, you can put up the frame, spread the cover over the top, fasten it and anchor the shelter to the ground. For added stability you can attach guy ropes, which are supplied with some models.

Some models in our test had up to 36 frame pieces of six or seven different sizes (as well as the joiners), all just slightly different in length, diameter or both. Some of the instructions weren't very useful for identifying frame parts and, while most pieces were labelled, some of the numbered stickers were already peeling off before we started testing.

Sorting out the many parts of the frame and working out how to put them all together is like a jigsaw puzzle — give yourself plenty of time.

The easiest models to assemble — it took our tester eight minutes, after he was familiar with them — were the smallest in the test, with the fewest parts. Of these, the only one that passed our tests overall was the **ENVIROSHADE Portashade**. The others took between 12 and 17 minutes to set up. These times are for one person assembling the shelter; it's probably easier with two.

Taking the shelter down is generally much easier and takes less time than assembling it.

... taking it with you ...

The sun shelters in our test are technically portable. But whether you can easily take them to the park is another matter. Five of the 12 models we tested are reasonably portable: not too heavy or bulky and have a carry bag. The **ENVIROSHADE Portashade** has the most suitable bag, with a good shoulder strap.

The other seven models weigh more than 10 kg and are more difficult to transport, especially if there's no carry bag supplied (as for the top-performing **SHELTA** models, which you have to store and transport in their cardboard box), or no shoulder strap on the carry bag (as for the 15 kg **SUMMIT Shade Shelter Deluxe**).

... and getting parts

Should you lose one of the many frame pieces, or a part gets damaged, contact the manufacturer; if the shelter is imported, the retailer. All but one of the manufacturers and retailers we spoke to said they stocked spare parts. Big W Discount Stores doesn't.

eight (kg)	Base area (m)	1 Waterproof	2 Side panel	3 Ease of use score (%)	4 Durability score (%)	5 UPF	Brand / model (in rank order by UPF *)
2.9 (in box)	3.3 diameter	✓	Optional extra	62	92	37-42	**SHELTA** Original Shadehouse **(A)**
4.4 (in box)	4.4 x 3.1	✓	Optional extra	68	86	37-42	**SHELTA** Ultimate Shadehouse **(B)**
5.0 (in bag)	3 x 3	✓	For one wall	60	65	16	**SUMMIT** Shade Shelter Deluxe **(C)**
2.0 (in bag)	3.35 x 3.35	**(L)**	Optional extra **(N)**	66 **(P)**	100	6-14	**ENVIROSHADE** Gazebo **(D)**
5.6 (in bag)	3.35 x 2.7	**(L)**	Optional extra	72	100	6-14	**ENVIROSHADE** Portashade **(D)**
0.5 (in bag)	3.4 x 2.9	**(L)**	Optional extra	60 **(P)**	100	6-14	**ENVIROSHADE** Summer Breeze **(D)**
1.9 (in bag)	3 x 3	**(M)**	For one wall	62	46	29	**SUMMIT** Shade Shelter
8.9 (in bag)	3 x 3			62	46	26	**RAYBURN** Gazebo SKU#819778 **(C) (E)**
8.7 (in bag)	3 x 3			62	45	11	**TIMBERLINE** Gazebo
2.4 (in bag)	3 x 3			62	34	7	**RAYBURN** Gazebo SKU#156354 **(E)**
6.8 (in bag)	3.35 x 2.44	✓		70	38	3	**RAYBURN** Sun Shelter SKU#819809 **(C) (E)**
7.9 (in bag)	3 x 3	✓		62	25	3	**RAYBURN** Gazebo SKU#673734 **(E)**

(J) The standard BBC Hardware/Hardwarehouse refund or exchange policy applies.
(K) The standard Big W 'money back if not satisfied' policy applies.
(L) A waterproof cover is available as an optional extra.
(M) The distributor says a newer model has a different waterproof coating and nylon corner pieces.
(N) On the new Coolaroo model, a side panel is supplied.
(P) The new model now on the market has had changes made to it that may affect its ease of use.

1 Waterproof

If it's claimed to be waterproof, a new sun shelter may protect you from a shower. The models with a polyester cover are claimed to be water-repellent, but they let through a constant fine mist of water during our tests, enough to wet you.

2 Side panel

A detachable side panel is useful for blocking out more sun or wind. It's included with both **SUMMIT** models; you clip it on with plastic shower rings to one side of the shelter. The new version of the **ENVIROSHADE Gazebo**, the **COOLAROO Gazebo** 3.35 x 3.35 also comes with a side panel; for some others it's an optional extra.

3 Ease of use score

We evaluated how easy the sun shelters are to assemble, transport and use. Portability makes up 20% of the score, and ease of assembly and 'usability' 40% each. The latter includes space, access and headroom.

4 Durability score

This score is based on the material's resistance to UV degradation. All models passed our initial strength tests for knitted and woven shadecloth. We measured the strength of the material again after 1000 hours of exposure to UV light and deducted the loss of strength (as a percentage) from the initial result. So a score of 100 means it retained its full strength, 92 indicates it lost 8% strength and so on.

Half the models in the test lost more than 50% of their initial strength — they'll probably tear or fall apart within a couple of seasons. Their much lower price means you could replace some of them every year for several years for the same price as buying a model from the *What to buy* list. However, the quality problems we found (see right), along with their poor durability score, made us think you'd be disappointed with them even though you'd paid less, and they're not recommended.

5 UPF

A sun shelter's most important attribute is its potential to protect you from harmful UV radiation. That's why we've ranked the products on their ultraviolet protection factor. For details about UPF ratings see *UPF and UV radiation*, page 23.

The measured UPF can vary between models with the same fabric due to slight variations in the weave, stretching or colour of the material. In our test this happened to the **SHELTA** and **ENVIROSHADE** models, so we've given the range of UPFs that was measured for their fabric. For other brands where we only tested one model, or models made from different fabrics, we've given the UPF we found.

Although the **SUMMIT Shade Shelter** and **RAYBURN Gazebo SKU#819778** were fine for their UPF, their durability and general quality failures made them 'not recommended.'

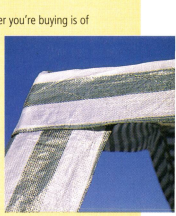
Poor quality

If you're spending hundreds of dollars on a product, we think you should get quality. But only one of the tested models had no quality control problems — the **ENVIROSHADE Summer Breeze**. All the others, especially the cheaper models, had at least one problem, ranging from minor cosmetic flaws to significant faults that could affect the product's long-term use.

One of the sun shelters we bought had all four peg-down loops missing, so we couldn't anchor it. Some of the other problems we encountered, before we even started testing, included:

- Stitching coming apart on covers.
- Pegs and loops too short for secure anchoring.
- The finish peeling off the frame parts.
- Some frame parts sticking together, making it difficult, or impossible, to pull them apart by hand.
- Frame springs (to keep the pieces together) sticking in the depressed position.

To ensure the sun shelter you're buying is of acceptable quality, check the parts in the shop, and keep the receipt and warranty details in case you need to exchange it or get a refund.



On the Rayburn Sun Shelter SKU#819809, the stitching was coming apart the first time we took it out of the box.

Safe holiday driving

You don't really need the kitchen sink on holiday — make sure you can see out of the car windows and that the boot isn't so heavy that your steering and headlights are affected.

For many CHOICE readers, the best time of year is just around the corner — your holiday. If it means spending some time in your car, get it prepared too.

IN BRIEF

- Both you and your car need to be properly prepared for take-off — here's how.
- Tips on safe and stress-free towing.

DRIVING LONG DISTANCES (ESPECIALLY on a hot day, surrounded by other traffic) can put a lot of stress on you and your car. So it's important you're both in top shape.

Preparing your car

It's annoying if your car breaks down on your holiday trip, but it can also be dangerous — for example, if it happens in the middle of a highway.

You can increase your chances of having a holiday free of car trouble. Have the engine tuned before you leave, so it'll use less petrol and is less likely to break down. While your car is in the garage, you could ask the mechanic to carry out a number of other checks as well. However, there's a lot you can quite easily do yourself — some of it should be part of your regular car maintenance anyway. Whatever you choose: do it far enough in advance to fix any problems.

- **Battery**: Make sure the terminals are clean and free of corrosion (grey/green deposits), the connections are tight and the battery's securely clamped in place.

Most modern batteries are maintenance-free. However, for older-style ones with caps on top you need to check the fluid level and top it up with distilled water if necessary (the plates inside the battery should be covered by about 5 mm of fluid). Don't forget to replace the caps.

Batteries emit explosive hydrogen gas, so don't smoke or bring open flames near them.

- **Oil level**: Check the dipstick and — if necessary — top up with the oil grade specified in your owner's manual. If after two or three tries there's still no oil showing on the dipstick, your oil system may have a leak. Don't start the engine; call your motoring association or a repairer for assistance. Don't overfill the oil to be 'on the safe side' — this causes its own problems.
- **Radiator**: Never remove the radiator cap while the engine's still hot, as the cooling system is under pressure and you could be sprayed with steam and hot coolant.

The radiator should be completely filled with coolant, which also protects the engine from corrosion. Top it up if necessary. If in an emergency you have to use water, make sure it's as clean as possible, and replace the coolant at your first opportunity, as some engine parts may corrode quickly.

- **Brakes**: If they squeak or if your car pulls to one side when you're braking, it's time to see your repairer.
- **Wires and hoses**: Check all wires (for example, the spark plug leads) and hoses for tight connection or leaking.
- **Tyres**: Check that all tyres (including the spare) have enough tread (at least 3–4 mm), and are inflated to the right pressure. If your car is loaded heavily, increase the pressure according to the manufacturer's recommendations (check your owner's manual or the

sticker inside the car — often in the glovebox or on the driver's door panel).

Look for damage and abnormal wear, which could indicate problems with the wheel alignment or the suspension.

Make sure the jack and other equipment needed to change a tyre are in good working order, and you know how to use them. Do you know where your car's jack points are?

■ **Lights and other functions**: Check that the headlights, indicators, tail, brake and reverse lights are working properly, and replace bulbs or fuses if necessary. Check the windscreen wipers and the demisting system and fill up the windscreen washer tank.

The steering wheel shouldn't have more than about 5 cm of play. If it does, get it fixed.

■ Load the car in a way that doesn't obstruct your vision, and don't put too much weight in the back, as this may affect your car's steering and the coverage of your headlights.

Preparing yourself

Together with drink driving and speeding, driver fatigue is one of the major causes of road accidents. But this type of accident tends to be more severe than average, as the fatigued driver usually doesn't have the reflexes to brake or take evasive action.

■ If you leave after a full day's work, you're likely to be quite tired already and shouldn't plan to cover a long distance.

■ If you're getting up very early to beat the traffic, make sure you still get a full night's sleep.

■ Ensure the car is well ventilated, as a lack of oxygen will make you tired more quickly.

■ Take regular breaks on long journeys — about 15 minutes every two hours. Get out of the car to stretch and walk around. If you plan ahead, you may even be able to take your rests at scenic spots.

■ Share the driving if possible. If there's only one driver, the passengers can help keep them entertained and awake, and remind them to take the necessary breaks.

■ Try to avoid driving during the hottest hours of the day if your car isn't air-conditioned.

■ Eat light meals rather than heavy, fatty food, and keep your fluid levels up, as dehydration will make you tired (but don't be tempted by that cold beer).

■ Make sure everyone wears seatbelts, and that children are properly restrained.

Towing tips

If you use your caravan or boat trailer only occasionally, it may have deteriorated while in storage — and so may your towing skills. If you've never towed before, these tips will help you too.

■ Make sure your trailer is roadworthy:

— Check the tyres for tread, pressure and deterioration (particularly if they're exposed to the sun a lot).

— Have the wheel bearings checked, especially on boat trailers, as they're regularly immersed in water.

— Check the trailer's wiring, and make sure all lights work properly.

■ Check the towbar and safety chain on your car for any damage or loose connections.

■ Make sure your trailer doesn't exceed the maximum tow weight for your car (see the owner's manual) and towbar (usually indicated on a sticker attached to the towbar).

■ Practise driving, particularly reversing and parking, with your trailer in tow before you leave on your trip.

■ Drive more carefully than you would if you weren't towing a trailer:

— Leave plenty of space between you and the car in front, as you'll require a longer braking distance and it'll allow overtaking traffic to merge safely in front of you.

— Accelerate and brake gently.

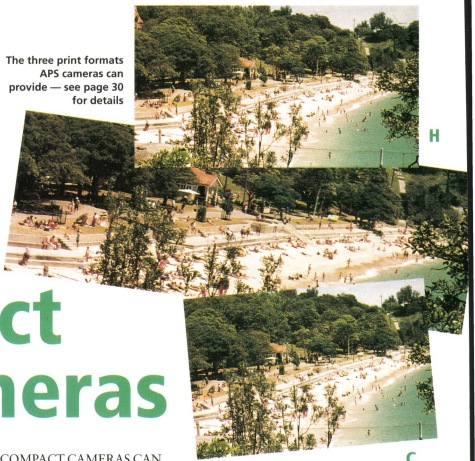
— Steer gently and constantly around corners, and avoid braking in corners.

— If the trailer starts swaying, accelerate gently or apply the trailer brake if one's fitted.

— If you've got a queue of traffic behind you, pull over when it's safe to do so, to let the cars behind you pass. Otherwise other drivers may be provoked into making risky overtaking manoeuvres. ❑

Check your trailer carefully — including lights, wiring and tyres — if you haven't used it for a while.

Choosing a compact camera can be more confusing than ever these days. What are the pros and cons of the different types and systems?



The three print formats APS cameras can provide — see page 30 for details

Compact cameras

IN BRIEF

- *Which type?*, right, helps you decide whether a single focal length or a zoom compact camera is for you.
- *What's APS?*, page 30, explores the differences between the Advanced Photo System (APS) and conventional 35 mm film.
- The table, pages 32–33, gives test results for 26 compact cameras: eleven 35 mm and 15 APS models.

THESE DAYS COMPACT CAMERAS CAN be either 35 mm or Advanced Photo System (APS). *What's APS?*, page 30, explains what's different about this system. This test covers eleven 35 mm and 15 APS compact cameras.

Which type?

Compact cameras can be divided into three categories, according to both their focal length (see note 1, page 32) and the way they focus:

- **Single focal length, fixed focus**

This type has a wide-angle lens (usually around 30 mm to 35 mm), which is good for taking photos of landscapes and buildings, but not for close-ups and portraits.

The fixed focus means the lens has a small aperture (see note 2, page 32), so everything that's more than about 1.5 m away will be in sharp focus in the photo. However, it also means the camera isn't good for taking photos in poor light conditions — particularly without a flash.

- **Single focal length, autofocus**

Typically, this type has a wide-angle lens (about 30 mm to 35 mm) with the same pros and cons as above. However, the ability to focus on objects according to their distance means the lens can have a wider aperture, and therefore take photos in a broader range of light conditions.

- **Zoom, autofocus**

Zoom lenses cover a range of focal lengths, usually from a wide-angle to a more or less extended telephoto length (good for close-ups and portraits).

What they can do

Most compact cameras in the test offer worry-free, point-and-shoot photography. They produce reasonable to good picture quality, and those with 'auto everything' (see *Common features and functions*, page 31) are quite easy to use.

The extended zoom range on some models gives you more creativity in choosing what to fit into your photo.

Their limits

If you want to take accurate, high-quality photos in all kinds of conditions, look for a single-lens reflex (SLR) camera, because compact models have a number of drawbacks in comparison. However, you'll pay quite a bit more for an SLR, and end up carrying more equipment.

- A general problem with compact cameras is the accuracy of their viewfinder: the negative will capture more than you can see through the viewfinder — so you may find things appearing on the edges of the photo you never intended to include.
- None of the tested models gives you full exposure control. So you can't choose both aperture and shutter speed, which limits the conditions under which you can photograph, and which effects you can create.
- You can't use different lenses with a compact camera.
- The built-in flash on most models is fairly limited, and you can't connect an external one to those tested.

The models in the *What to buy* list are profiled in rank order within types. Prices shown are a good target to aim for when shopping around, based on nationwide checks in September 1998. Anything lower is a bargain.

35 mm, zoom, autofocus

ROLLEI Prego 115 Slimline

Target price: $639

Good points

- Indicators for 'subject in focus' and 'subject out of focus range'.
- Most versatile of all the cameras tested.
- A lot of convenient features, which make it very easy to use.
- Remote control available as an extra.
- Series exposure, which means you can take photos continuously by keeping the shutter release button pressed down.
- Allows you to take panoramic shots.
- Multi exposures, which means you can expose the same frame several times for artistic or trick shots.
- Dioptic eyepiece adjustment may enable some people to use the viewfinder without their glasses.

Bad points

- Picture quality rated only 'satisfactory'.
- Relatively poor exposure accuracy.
- Red-eye reduction not very effective.
- Relatively poor maximum flash range.

OLYMPUS mju Zoom 140

Target price: $590

Good points

- Good exposure accuracy.
- Indicators for 'subject in focus' and 'subject out of focus range'.
- Splashproof.
- Dioptic eyepiece adjustment may enable some people to use the viewfinder without their glasses.
- Remote control available as an extra.

Bad points

- Relatively poor optical quality.
- Poor focus versatility.
- Relatively long shutter delay.

APS, zoom, autofocus

FUJIFILM Fotonex 3500ix MRC

Price: $699 (recommended retail price)

Good points

- Best picture quality in the test.
- Indicators for 'subject in focus' and 'subject out of focus range'.
- Very good exposure accuracy.
- Remote control, so you can easily take photos of yourself.
- Very good focus versatility.
- Good range of APS features — see page 31 for details.

Bad points

- Relatively long shutter delay.
- Poor maximum flash range.

MINOLTA Vectis 40

Target price: $870

Good points

- Many convenient features — easy to use.
- Indicators for 'subject in focus' and 'subject out of focus range'.
- Splashproof.
- Series exposure, which means you can take photos continuously by keeping the shutter release button pressed down.
- Dioptic eyepiece adjustment may enable some people to use the viewfinder without their glasses.
- Remote control available as an extra.
- Good range of APS features — see page 31 for details.

Bad points

- Bad distortion, so straight lines may appear bent.
- Relatively poor exposure accuracy.
- Very poor viewfinder accuracy.
- No exposure override options.
- Poor maximum flash range.
- Relatively long shutter delay.

APS, single focal length, autofocus

KODAK Advantix 3600ix

Target price: $350

Good points

- Good picture quality.
- Easy to use.
- Very good exposure accuracy.
- Indicators for 'subject in focus', 'subject out of focus range' and 'subject out of flash range'.
- Very quick flash recycling time.

Bad points

- Limited range of APS features (see page 31 for details).
- Red-eye reduction not very effective.
- The flash doesn't light up the photo evenly.
- No exposure override.
- Relatively long delay between pressing the shutter release button and the shutter opening, which can make it difficult to catch a spontaneous event.
- Poor maximum flash range.
- No focus override.
- No flash interlock, which means the camera allows you to take a photo that needs the flash, even if the flash isn't ready.

WHAT TO BUY

35 mm, zoom, autofocus	
ROLLEI Prego 115 Slimline	$639
OLYMPUS mju Zoom 140	$590
APS, zoom, autofocus	
equal **FUJIFILM Fotonex 3500ix MRC**	$699
equal **MINOLTA Vectis 40**	$870
APS, single focal length, autofocus	
KODAK Advantix 3600ix	$350

What's APS?

The Advanced Photo System (APS) uses a different type of film that isn't compatible with conventional 35 mm cameras. So if you want the advantages of APS film you'll have to buy a new camera.

- APS film is smaller than 35 mm cartridges, allowing for correspondingly smaller cameras.
- The film is completely contained in the cartridge, so you never have to handle it. To load the film, you just drop the cartridge into the camera and close the flap — the camera takes care of the rest.
- A switch on the camera allows you to select one of three picture formats:

— **C** (classic) format, with the print size ratio of 2:3 height:width that you're used to from 35 mm photography.

— **H** (HDTV) or 'group' format, with a ratio of 9:16 — the same as a wide-screen TV.

— **P** (panoramic) format, with a print size ratio of around 1:3. The P format negative is in fact the same width as the H format, with the top and bottom cut off. The prints are then enlarged more.

You'll see the chosen format in the viewfinder and the camera stores your selection on the film, where it can be read by the processing equipment.

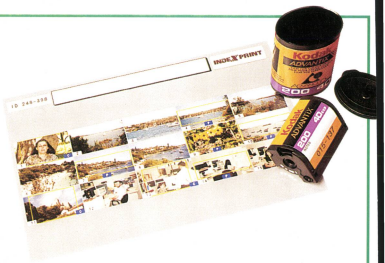
However, as the camera always exposes the whole frame (which is the H format), you can order reprints of whichever format you want — no matter what you selected when taking the photo.

- After the negatives have been processed, they're stored inside the cartridge again. You'll get an index print that shows miniature versions of all the images on your film (see the photo above).

The film cartridge carries an identification number that's also on the index print and on the back of each of the prints. So identifying a photo you want to reprint is very convenient.

- The film has a magnetic coating where the camera can store certain information. This in turn can be read by the processing equipment and is called 'information exchange' or 'ix', which you'll see in the name of some cameras.

APS film cartridges have a film status indicator — handy if you haven't used it for a while.



With APS you get an index print showing miniature versions of the photos on your film, instead of a negative.

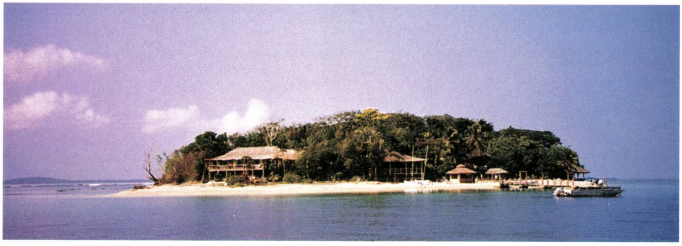
The price of APS

- APS film is currently available in Australia in ISO 100, 200 and 400, and with 15, 25 and 40 exposures. For a 25-exposure film, expect to pay $6 to $8 for ISO 200 film, or $6.50 to $9 for ISO 400 film.
- If you want overnight or one-hour-processing, you have to find a minilab that can process APS film on-site. Currently, only about 10% of minilabs in Australia can.

Most pharmacies and other agents for wholesale processing accept APS film, but send it to a central lab, so you may have to wait several days for your prints.

- Up to now, you've had to pay different prices for each print size on a print-by-print basis — typically $5 for the processing and index print, 40 cents for C-size, 45 cents for H-size and 75 cents for P-size. However, some wholesale labs have started to introduce flat-rate prices per film ($14 to $15 for 25 exposures, including index print), which may be worth shopping around for — especially if you want a lot of panoramic prints.

Expect to pay at least twice the above amounts when ordering reprints.



An example of APS's panoramic format.

Common features and functions on all the models tested

- Autofocus, except the **FUJIFILM Fotonex 10**, which has fixed focus, making it less suitable for taking photos in poor light.
- Automatic exposure control, except the **FUJIFILM Fotonex 10**, which has fixed exposure.
- Half-press of the shutter release button to hold focus, except the **FUJIFILM Fotonex 10** and **KODAK Advantix 3100 AF**.
- Built-in flash that operates automatically if the light conditions require it, except on the **FUJIFILM Fotonex 10** (whose flash needs to be set manually). The autoflash can be switched off on all models except the **KODAK Advantix 3100 AF**.
- Red-eye reduction, except the **FUJIFILM Fotonex 10** and **KODAK Advantix 3100 AF**.
- Autofocus aiming point in the viewfinder, except the **FUJIFILM Fotonex 10** and **KODAK Advantix 4700ix Text-Zoom**.
- Motorised film loading, winding to the first frame, moving from frame to frame and rewind.
- LCD screen showing essential exposure information and LCD frame counter, except the **FUJIFILM Fotonex 10**.
- Indicator for correctly loaded film (all 35 mm models; with APS models you simply drop the film into the camera and close the flap).
- Lithium battery, except the **FUJIFILM Fotonex 10** and **YASHICA EZ 105**, which use alkalines.
- Lens protection.
- Self-timer, except the **FUJIFILM Fotonex 10**.
- Tripod socket, except the **FUJIFILM Fotonex 10**.
- Wrist or neck strap.

None of the tested models:

- Can be connected to an external flash.
- Has an out-of-flash-range indicator, except the **KODAK Advantix 3600ix**.
- Allows you to stop the relatively noisy auto rewind when the whole film is exposed.
- Can use filters.

On APS cameras, a switch allows you to select one of three print sizes (C, H or P).

APS features

Brand / model	1 Mid-roll film change	2 Date and time print on back	3 Title print on back	4 Print quantity	5 Print cancel
APS zoom, autofocus					
FUJIFILM Fotonex 3500ix MRC	✓	✓	✓	✓	✓
MINOLTA Vectis 40	✓	✓	✓	✓	✓
FUJIFILM Fotonex 400ix Zoom MRC	✓	✓	✓	✓	✓
NIKON Nuvis 160i	✓	✓	✓		
CANON Elph 370Z	✓	✓	✓	✓	✓
YASHICA Acclaim Zoom 65	✓	✓	✓		
KODAK Advantix 4100ix Zoom		✓			
KONICA Super Big Mini Zoom BM-S 630 Z		✓			
KODAK Advantix 4700ix Text-Zoom		✓	✓		
APS single focal length, autofocus					
KODAK Advantix 3600ix		✓			
KONICA Super Big Mini BM-S 100		✓	✓		
FUJIFILM Fotonex 100ix		✓			
NIKON Nuvis Mini i		✓			
KODAK Advantix 3100 AF					
APS single focal length, fixed focus					
FUJIFILM Fotonex 10					

1 Mid-roll film change

This allows you to remove and later reload a partially exposed APS film, for example if you want to switch between different film speeds.

The camera will automatically wind the reloaded film to the next unexposed frame. An indicator on the film cartridge tells you whether the film is unexposed, partially exposed, fully exposed but unprocessed, or processed (see the diagram, page 30).

2 Date and time print on back

The date and time the picture was taken are automatically recorded and printed on the back of the photo.

3 Title print on back

This function allows you to select a pre-programmed message or title such as 'birthday', 'holiday' or 'I love you', which will be printed on the back of the photo. Film, frame and minilab identification numbers are also printed on the back of the photo.

4 Print quantity

You can record the number of copies you'd like of a picture immediately after you've taken it (for example, if you've taken a group shot and already know each of you wants a copy). The processing machine automatically prints the requested number — for the price of first prints rather than reprints.

5 Print cancel

You can select 'zero' as print quantity if you know a picture won't turn out. You'll still have wasted a frame — but you won't have to pay to process a bad print.

A feature of some APS cameras that none in this test had is **fixed-time printing**, which allows you to override a feature called 'Print quality improvement' (PQI).

PQI automatically records information about the conditions each picture is taken in, such as lighting (artificial light, flash), exposure settings or magnification. The processing equipment reads this information and adjusts the printing parameters (such as colour tones) accordingly, giving supposedly better-quality prints.

However, you may deliberately want 'mood' lighting (for example, a dusky sunset) without the lab 'correcting' it. For this you'd need fixed-time printing to override PQI.

COMPACT CAMERAS

	Brand / model (in rank order within types)	Manufacturer / distributor	Origin	Target price ($)*	Warranty (years)	Weight (g)**	Dimensions (L x H x D; mm)	1 Focal length (mm)	2 Maximum aperture (f-stops)
	35 mm zoom, autofocus								
	ROLLEI Prego 115 Slimline	Kayell	Germany	639	1	303	121 x 65 x 43	38–115	4.4–10.9
	OLYMPUS mju Zoom 140	R Gunz	Japan	590	2	293	117 x 64 x 47	38–140	4.0–10.6
	SAMSUNG Fino 115S	Samsung	Korea	499	2	303	121 x 65 x 43	38–115	4.4–10.9
	PENTAX Espio 200	C R Kennedy	Japan	699	1	387	125 x 72 x 74	48–200	5.2–12.6
equal	**KONICA** Z-UP 70 Super	Konica	China	249	1	251	114 x 64 x 44	35–70	5.5–9.0
	PENTAX Espio 160 Quattro	C R Kennedy	Japan	599	1	377	125 x 71 x 71	38–160	4.7–12.2
equal	**CANON** Sureshot 105 Zoom	Canon	Taiwan	299	1	268	123 x 65 x 48	38–105	4.0–10.0
	MINOX CD 112	Adeal	Germany	490	1	284	118 x 68 x 52	38–112	3.8–9.1
	NIKON Zoom 600QD	Maxwell Optical	Indonesia	399	3	322	124 x 65 x 55	38–110	3.9–10.1
	RICOH RZ 735	Ricoh	Malaysia	199	2	242	115 x 63 x 41	35–70	5.6–9.7
	YASHICA EZ 105	Tasco	China	339	1	320	126 x 73 x 50	38–105	5.1–10.5
	APS zoom, autofocus								
equal	**FUJIFILM** Fotonex 3500ix MRC **(A)**	Hanimex	Indonesia	699 **(A)**	2	202	96 x 55 x 35	21–58	4.9–6.8
	MINOLTA Vectis 40	Haco	Japan	870	1	350	121 x 70 x 60	30–120	3.8–9.6
	FUJIFILM Fotonex 400ix Zoom MRC	Hanimex	Indonesia	549	2	259	121 x 69 x 50	25–100	5.5–10.2
	NIKON Nuvis 160i	Maxwell Optical	Thailand	640	3	322	115 x 63 x 49	30–125	4.6–10.9
	CANON Elph 370Z	Canon	Japan	599	1	231	92 x 62 x 33	23–69	4.5–9.9
	YASHICA Acclaim Zoom 65	Tasco	China	339	1	216	110 x 63 x 49	32–65	5.3–9.9
equal	**KODAK** Advantix 4100ix Zoom	Kodak	Indonesia	399	1	230	123 x 64 x 41	30–60	4.5–8.5
	KONICA Super Big Mini Zoom BM-S 630 Z	Konica	Indonesia	299	3	217	115 x 61 x 42	30–60	4.5–8.8
	KODAK Advantix 4700ix Text-Zoom	Kodak	Indonesia	449	1	263	120 x 64 x 42	30–60	6.0–7.0
	APS single focal length, autofocus								
	KODAK Advantix 3600ix	Kodak	Mexico	350	1	190	119 x 65 x 35	24	3.6
	KONICA Super Big Mini BM-S 100	Konica	China	299	3	177	103 x 57 x 30	28	3.5
	FUJIFILM Fotonex 100ix	Hanimex	China	189	2	164	106 x 58 x 31	25	4.0
	NIKON Nuvis Mini i	Maxwell Optical	Indonesia	299	3	159	104 x 58 x 30	25	4.0
	KODAK Advantix 3100 AF	Kodak	Mexico	289	1	179	119 x 64 x 41	25	4.6
	APS single focal length, fixed focus								
	FUJIFILM Fotonex 10	Hanimex	Indonesia	99	2	160	120 x 63 x 35	23	8.0

* Prices shown are a good target to aim for when shopping around, based on nationwide checks in September 1998.
** Including batteries
(A) According to the manufacturer, this model is to be released in Australia in mid-November. The price is the recommended retail price.
(B) ISO 25–400 for slide film.
(C) Date-marking version available at extra cost.
(D) Year only.
(E) The flash is relatively far from the lens on this model, so it doesn't need additional red-eye reduction.
(F) After the impact test the camera could no longer record the date and time on the film.

1 Focal length (mm)

For 35 mm cameras, a focal length of 50 mm most closely represents what the human eye sees (40 mm for APS cameras; see below). Anything smaller than this is called wide-angle: the smaller the number, the wider the angle of view and the more of the subject you can fit into your picture.

Higher focal lengths narrow the angle and make a distant subject appear closer (telephoto). A zoom lens allows you to vary the focal length and gives you much more versatility in fitting a subject into your photo.

Extreme focal lengths (both high and low) tend to increase the distortion of a photo: the lens makes straight lines appear curved, particularly towards the edges of the picture.

As the size of an APS film frame is smaller than 35 mm, the size of a subject at the same focal length is also different. To compare the focal lengths of the two systems, divide the APS focal length by 0.8 (for example, 24 mm in APS would be 30 mm in conventional cameras).

2 Maximum aperture (f-stops)

The aperture is the adjustable opening that lets light into the camera. Its width is measured in f-stops: the lower the number, the wider the aperture and the more light will reach your film, making the camera more versatile in poor light conditions. (The numbers in the table are real measurements, and may be different from what you're used to if you have an SLR camera.)

For zoom cameras the first number refers to the maximum (widest) aperture setting at the lowest focal length, the second to the maximum setting at the highest (see note 1).

The maximum aperture is also an indicator of lens quality — the lower the number, the better.

3 Film speed range (ISO)

This tells you which film speeds the camera can adjust to. The higher the ISO number, the more light-sensitive the film is, allowing you to capture fast-moving objects or to take pictures in poor light. **Note:** Most APS models can adapt to a wide range of film speeds. However, currently there's only ISO 100, 200 and 400 film available in Australia for APS cameras.

4 Date marking

A tick in this column indicates the camera can record the date the photo was taken on the back of the print. The date functions of the relevant models in this test are year 2000-compatible.

	4 Date marking	5 Splashproof	6 Red-eye reduction	7 Picture quality score (%)	8 Versatility score (%)	9 Convenience score (%)	10 Construction score (%)	11 Overall score (%)	Brand / model (in rank order within types)	
									35 mm zoom, autofocus	
200	✓		SP	63	77	84	100	75	**ROLLEI** Prego 115 Slimline	
200	(C)	✓	MP	72	59	81	100	74	**OLYMPUS** mju Zoom 140	
200	✓		SP	60	63	86	100	71	**SAMSUNG** Fino 115S	
200			SP	68	56	75	100	70	**PENTAX** Espio 200	
200 (B)			LB	75	45	70	100	69	**KONICA** Z-UP 70 Super	
200	✓		SP	60	55	83	100	69	**PENTAX** Espio 160 Quattro	equal
200			LB	62	56	68	100	66	**CANON** Sureshot 105 Zoom	
200	(D)		LB	59	54	75	100	66	**MINOX** CD 112	equal
600	✓		LB	63	48	77	100	66	**NIKON** Zoom 600QD	
800	(C)		LB	66	36	61	100	61	**RICOH** RZ 735	
800			LB	54	43	67	100	59	**YASHICA** EZ 105	
									APS zoom, autofocus	
200	✓		MP	80	57	67	100	73	**FUJIFILM** Fotonex 3500ix MRC (A)	
200	✓	✓	MP	69	58	82	100	73	**MINOLTA** Vectis 40	equal
200	✓		MP	68	59	73	100	70	**FUJIFILM** Fotonex 400ix Zoom MRC	
600	✓		LB	71	49	75	100	69	**NIKON** Nuvis 160i	
10,000	✓		LB	63	60	73	100	68	**CANON** Elph 370Z	
600	✓		LB	69	44	62	100	64	**YASHICA** Acclaim Zoom 65	
600	✓		LB	63	45	61	100	62	**KODAK** Advantix 4100ix Zoom	
600	✓		LB	66	47	57	100	62	**KONICA** Super Big Mini Zoom BM-S 630 Z	equal
600	✓		(E)	66	42	58	88 (F)	60	**KODAK** Advantix 4700ix Text-Zoom	
									APS single focal length, autofocus	
600	✓		LB	77	41	70	100	69	**KODAK** Advantix 3600ix	
200	✓		SP	67	52	70	100	67	**KONICA** Super Big Mini BM-S 100	
400	✓		LB	74	32	61	100	63	**FUJIFILM** Fotonex 100ix	
800	✓		LB	65	34	64	100	61	**NIKON** Nuvis Mini i	
800				65	17	61	100	56	**KODAK** Advantix 3100 AF	
									APS single focal length, fixed focus	
400				66	13	49	100	52	**FUJIFILM** Fotonex 10	

5 Splashproof

Only two cameras claim to be splashproof and both passed our shower test. None of the other models promises any protection from water.

6 Red-eye reduction

If the flash is located close to the lens (as most built-in flashes are), people being flash-photographed may end up with red eyes in the photo.

Multiple pre-flashes (MP) or a light beam (LB) are more effective at preventing this than a single pre-flash (SP), which is, however, still better than no red-eye reduction at all (blank).

7 Picture quality score

For picture quality, we assessed the following:

- Optical quality (for example, picture sharpness and distortion of straight lines).
- Exposure accuracy.
- Focus accuracy.
- Red-eye reduction (see note 6).
- Viewfinder accuracy (is what you see through the viewfinder what you'll actually get in the photo?).
- Flash uniformity (does the flash illuminate all parts of the picture evenly?).

8 Versatility score

For versatility, we assessed:

- Focal length range (see note 1).
- Close-up ability.
- Exposure override (can you adjust the automatic settings?).
- Shutter delay (how long does it take between operating the shutter release button and the camera opening the shutter?).
- Film speed range (see note 3).
- Maximum flash range.
- Autofocus effectiveness (if applicable).
- Shutter speed range.

9 Convenience score

For convenience, we assessed:

- Instruction manuals.
- Ease of loading film.
- Ease of winding film.
- Lens protection.
- Ease of adjusting the focal length (where applicable).
- Flash battery life.

10 Construction score

To assess how well constructed the cameras are — and therefore how robust they're likely to be — we looked for manufacturing faults and carried out an impact test. All the cameras except the **KODAK Advantix 4700ix Text-Zoom** scored 100% for this.

11 Overall score

The overall score is a combination of picture quality, versatility, convenience and construction, weighted as follows:

- Picture quality: 40%.
- Versatility: 25%.
- Convenience: 25%.
- Construction: 10%.

Snap!

The range of single-use cameras is getting more and more versatile — there are panoramic, black-and-white and underwater models. But what about their quality?

IN BRIEF

- **The picture quality of single-use cameras ranges from OK to good, and they're relatively easy to use.**
- **They do have limitations: fixed focus (so they're not good for close-ups) and, with some, inaccurate viewfinders.**

SINGLE-USE CAMERAS CAN BE USEFUL when you don't have your proper camera with you, where there's a risk of a more expensive model getting damaged or stolen, if you want to take special photos your normal camera may not be able to handle (for example, panoramic or under water), or as a first camera for your kids.

Pros and cons

Together with some of our European counterparts, we tested 23 single-use models.

- In general, their optical quality was OK, in some cases even good (the **FUJIFILM Quicksnap Super Slim** models with and without flash).
- Most of them were relatively easy to use.
- Flash models can usually illuminate subjects up to three or four metres away, the **KODAK Fun Gold Flash** up to five metres.

However, they have their limitations:

- They're fixed-focus, which means they have a relatively small aperture so they can focus on objects more than about 1 m to 1.5 m away — but that means they're not good for close-ups and the aperture lets in relatively little light.

That's why the models in the test come with relatively light-sensitive ISO 400 or 800 film. However, they still have their limits in poor light conditions, and the prints may turn out a bit grainier than those from the ISO 100 or 200 film you're more likely to use with your compact or single-lens reflex (SLR) camera.

- Some of the tested models have a very inaccurate viewfinder: the negative captures more than you can see through the viewfinder when taking the photo. So your main subject may turn out smaller than you expected, and you may find things appearing along the edges of the photo you never intended to include.

Processing

All the 35 mm cameras tested have 27 exposures, except the panoramic ones, which have 15. The advanced photo system models (APS) on test have 25 exposures. See page 30 for more on APS.

When you want your film developed, all you do is take the whole camera to a processing lab. Don't attempt to take out the film yourself as you may damage it.

Agfa and Kodak collect the used cameras from the labs and send them to the manufacturer overseas, where some parts are reused and others recycled. Fuijfilm takes back single-use cameras of any brand and recycles the plastic casing into products such as park benches. Unfortunately, there's no such scheme in place for Ilford and Konica models. With the growing popularity of single-use cameras, CHOICE would like to see all manufacturers reuse or recycle the parts.

Cost

In the long run, prints taken with a single-use camera will cost you more than with a normal one — simply because you also have to pay for the camera. However, as most people only use single-use models in special situations, this may not be an issue. ❑

Rating system

The percentage in brackets next to the model names is the overall score, and is a combination of the following scores:

- **Standard models: optical quality 45%; viewfinder accuracy 25%; ease of use 30%.**
- **Models with a flash and/or a special feature (such as panoramic): optical quality 45%; viewfinder accuracy 25%; ease of use 22%; flash/special features 8%.**

Black-and-white

The **ILFORD HP5 Plus** (66%, $20 RRP*) was the only black-and-white model we found in time for the test. It has one of the best lenses tested, but an inaccurate viewfinder. During our price check, we also found a **KONICA Film-In Black & White Flash** ($23*).

WHAT TO BUY

Prices shown are mostly a target price compiled from a nationwide price check in October 1998; some are recommended retail prices (indicated in brackets as RRP). Models that were difficult to find in our price check are indicated by a *.

Standard

Standard single-use cameras without a flash can take photos outdoors and in relatively bright conditions. Models with a flash can handle poorer light if the subject is relatively close, and indoors. Each of the tested models comes with and without a flash, and the **AGFA Le Box Go!** came top in both categories due to its very accurate viewfinder and good ease of use. The **FUJIFILM Quicksnap** with and without flash have quite inaccurate viewfinders.

What to buy: Agfa Le Box Go! with or without flash

Without flash

AGFA Le Box Go! (69%)	$10
KODAK Fun Gold (66%)	$12
KONICA Film-In (66%)	$11
FUJIFILM Quicksnap Super 800 (65%)	$13
KODAK Fun Classic (65%)	$12
FUJIFILM Quicksnap (57%)	$13

equal

equal

With flash

AGFA Le Box Go! Flash (71%)	$20
KONICA Film-In Flash (68%)	$20
KODAK Fun Flash (66%)	$25
KODAK Fun Gold Flash (65%)	$25
FUJIFILM Quicksnap Super 800 Flash (63%)	$25*
FUJIFILM Quicksnap Flash (56%)	$20

Panoramic

For landscapes, large groups, and very wide or tall subjects, you need a panoramic model. For panoramas, the shorter the focal length of a camera, the better the panoramic effect. The **FUJIFILM Quicksnap Panorama** has a better-quality lens, slightly more accurate viewfinder and is easier to use, but has a focal length of 32 mm — poor for a panoramic camera (see *Compact cameras* on page 28 for more information on focal length). The **KODAK Fun Panoramic** has a focal length of 25 mm — by far the widest-angle lens in the test — which is why it's recommended.

What to buy: Kodak Fun Panoramic.

FUJIFILM Quicksnap Panorama (63%)	$19
KODAK Fun Panoramic (59%)	$18

APS, with and without flash

With the single-use APS models in our test you can switch between two different picture formats (group and panoramic), and get an index print (see page 30). But they're usually more expensive to buy and process than 35 mm models.

What to buy: Kodak Fun Advantix Flash

The **KODAK** APS model was the best in this group overall, with one of the most accurate viewfinders. While these **FUJIFILM** APS models have the best lenses in the test, their viewfinders are very inaccurate.

KODAK Fun Advantix Flash (73%)	$28 RRP*
FUJIFILM Quicksnap Super Slim (65%)	$13 RRP*
FUJIFILM Quicksnap Super Slim Flash (64%)	$24*

Waterproof

This type is waterproof to depths of 2 m (the **AGFA**) to 4 m (the **KODAK**). You may want to use one just because there's a chance the camera may get wet — for example, when boating, bushwalking or on the beach.

The **KONICA Film-In Waterproof** and the **AGFA Le Box Ocean** were the best overall in this category. However, you can take the **AGFA** to a water depth of only 2 m (compared to the **KONICA's** 3 m). The **FUJIFILM Quicksnap Waterproof Marine 800** (up to 3 m) has the most inaccurate viewfinder of all the tested cameras.

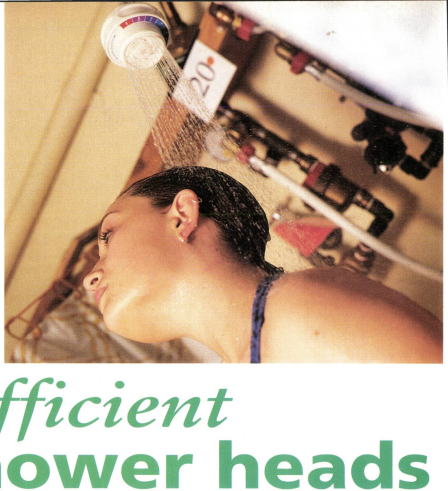
What to buy: Konika Film-In Waterproof

KONICA Film-In Waterproof (68%)	$20
AGFA Le Box Ocean (66%)	$20
KODAK Fun Aquasport (56%)	$20
FUJIFILM Quicksnap Waterproof Marine 800 (54%)	$20

Telephoto

This is convenient if you're relatively far away from the subjects you want to photograph. The **FUJIFILM Quicksnap Super 800 Tele 100** (63%, $20 RRP*) was the only telephoto model we found. It claims a focal length of 100 mm (we calculated 98 mm), performed OK and was quite easy to use.

Save water? Save money? Save the environment? Low-flow shower heads are pretty promising in these respects, but how comfortable and effective are they?



Water-efficient shower heads

IN BRIEF

- **Water-efficient shower heads don't have to be weak and ineffective. Our trialists found seven that deliver satisfying showers, and some of these scored better than models costing $130–$150 more.**
- **Water-efficient shower heads can also save you money on power and water costs and cut greenhouse gas emissions (see *Saving water, energy and money*, page 39).**

THE BENEFITS OF INSTALLING A water-efficient shower head seem as clear as day: you'll save money on your energy and water bills while also helping the environment. And if your household frequently runs out of hot water when the shower's in demand, a low-flow shower head will help stretch that supply a bit further.

Realistically, though, if the low-flow models only manage a measly drizzle or foggy mist, no argument in the world is likely to convince you to buy one. That's why we asked a group of people to tell us how good these shower heads feel and how well they work.

And the verdict is...

The trialists were most satisfied with the top seven shower heads, although the majority in the trial provided a reasonably comfortable, effective shower. That's good news, especially as they didn't know they were using low-flow shower heads.

But beware: there were still some shower heads that elicited comments like "it felt like a greenhouse watering system set to mist" and "the kind of shower head you'd find in a caravan park".

And don't go by price when you're shopping for a water-efficient shower head. The trialists preferred several models over others that cost $130–$150 more.

TIP

If you buy a low-flow shower head that doesn't come with an arm, you can buy one and attach it without affecting its water-efficiency.

The best and worst

We asked the trialists to score how well the shower heads wet them all over and how effectively they rinsed away soap and shampoo. In these critical areas three models consistently bottomed out in the scores, always in the same order: the **AMWAY** was third from last, the **DES DUNNINGS** was second from last, and the **BRASSHARDS SR116C** scored lowest by far. And, just as consistently, the **TELEDYNE** always had the best scores for wetting and rinsing.

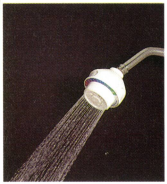
Trialists also rated the coverage and comfort of the spray. Not surprisingly, the same three shower heads finished last, though the order shuffled around. On top for spray comfort was the **TELEDYNE**, while the **FLEXISPRAY Conserva Calypso Massage 31-0753** gave the best coverage.

WHAT TO BUY

	TELEDYNE Water Pik SM 64E	$75
equal	**CON-SERV DS 002B***	$65
equal	**SHOWERKING — The Pulsator**	$33
equal	**FLEXISPRAY Conserva Calypso Massage 31-0753**	$40
equal	**BRASSHARDS SR331C**	$18
equal	**FLEXISPRAY Conserva Calypso Hi Rise 31-0593**	$30
equal	**GROHE Relexa 28 200**	$170

*Now called Con-Serv OH 002B

The shower heads in the *What to buy* list are profiled in rank order from left to right. Prices shown are recommended retail. Trialists' comments are in italics.

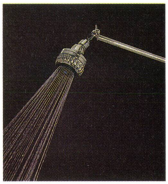


TELEDYNE Water Pik SM 64E

Price: $75

Best for effectiveness (getting you wet, and removing soap and shampoo) and comfort. Also has a good range of easy-to-use spray adjustments.

"Lots of settings to choose from and all were great!"

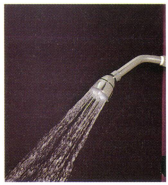


SHOWERKING — The Pulsator

Price: $33

Very good for comfort and effectiveness. Trialists liked the feel of the spray.

"The massage setting had just the right hardness without stinging the flesh."



BRASSHARDS SR331C

Price: $18*

Relatively comfortable spray, but it's not adjustable, and for some it was too harsh. Good scores for comfort and effectiveness.

"It could have been a little less forceful."

*The price we paid.

GROHE Relexa 28 200

Price: $170

Good comfort and effectiveness, and some trialists liked its unusual looks. On the downside, this is one of the most expensive models in the trial.

"Nice look; good movement of the head in all directions."

CON-SERV DS 002B

(now called OH 002B)

Price: $65

Very effective, and good spray coverage and comfort. Trialists liked its adjustable spray settings.

"The spray was a little strong but pleasurably so."

FLEXISPRAY Conserva Calypso Massage 31-0753

Price: $40

Very effective at wetting and rinsing, and it had the highest score for spray coverage.

"I really liked the massage — very deep sensation."

FLEXISPRAY Conserva Calypso 31-0593

Price: $30

Good score for effectiveness. Trialists weren't quite as enthusiastic about the comfort and feel of the spray — which isn't adjustable.

"I would have liked to be able to personalise the spray."

What about the rest?

■ All the other shower heads had notably lower scores for both comfort and effectiveness.

The trial

Over the course of a week we had 15 people — of different heights and ages, and with different hair lengths — try each of the 20 shower heads in the trial, but we didn't tell them they were using low-flow models. The shower heads were trialled under lab conditions to prevent water temperature and pressure fluctuations.

The shower heads in the trial either have a AAA rating, which means they've been accredited to the Australian standard, or have been tested according to the standard and are awaiting accreditation. They must have a flow rate of no more than 9 L per minute (regular shower heads usually have flow rates between 15 L and 25 L per minute) and they must produce an even spray of droplets big enough not to lose too much heat as they descend.

WATER-SAVING SHOWER HEADS

	Brand / model (in rank order)	Manufacturer / distributor	Contact number	Origin	Warranty (years)	Price (5
	TELEDYNE Water Pik SM-64E **(A)**	Stones Promotions	(02) 9516 4681	USA	3	75
equal	**CON-SERV** DS 002B **(B)**	Con-Serv	(07) 3856 4411	Australia / Israel	5	65
	SHOWERKING — The Pulsator	Eddy Brewer Sales	(03) 9579 2122	Taiwan	5	33
	FLEXISPRAY Conserva Calypso Massage 31-0753 **(C)**	Flexispray	1800 035 330	Israel	5 **(E)**	40
equal	**BRASSHARDS** SR331C	BrassHards Group	(07) 3359 3674	Not stated	Not stated	18 **(G)**
	FLEXISPRAY Conserva Calypso Hi Rise 31-0593 **(C)**	Flexispray	1800 035 330	Israel	5 **(E)**	30
	GROHE Relexa 28 200	Argent Australia	1800 356 717	Germany	5	170
	DELRANA R120CP	Delrana Luxury Showers	1800 074 120	Taiwan	2 **(F)**	32
	INTERBATH Hi-Lo Classic II Rainmaker B27425/25200CW **(D)**	Interbath Australia	1800 648 753, (03) 9558 0655	USA	5	50
equal	**CAROMA** Bathmates 314123 W	GWA Taps	13 25 20	Australia	1	31
	INTERBATH Hi-Lo Adjustable Shower Arm B27425/28444 **(D)**	Interbath Australia	1800 648 753, (03) 9558 0655	USA	5	40
equal	**IRWELL TAPS** Australis 823841C	GWA Taps	13 25 20	Italy	1	173
	RIO 1661	Art Plastics	(08) 9309 4688	Australia	1	17
	IRWELL TAPS All Directional 823105	GWA Taps	13 25 20	Italy	1	74
	CON-SERV DS 003 **(B)**	Con-Serv	(07) 3856 4411	Australia / Italy	5	53
	SHOWERKING — The Rejuvenator	Eddy Brewer Sales	(03) 9579 2122	China	5	30
	DELRANA Kestrel Massage R140CP	Delrana Luxury Showers	1800 074 120	Taiwan	5	32
	AMWAY Shower Rose E-9444A	Amway	1800 022 034	Italy / Norway	5	84
	DES DUNNINGS All Directional G119	Dunnings Engineering	(08) 8269 4555	Taiwan	Not stated	40 **(G)**
	BRASSHARDS SR116C	BrassHards Group	(07) 3359 3674	Not stated	Not stated	15 **(G)**

The AAA-rating label to look for on water-efficient appliances.

The Smart Showerhead program

The aim of the NSW Sustainable Energy Development Authority's (SEDA) Smart Showerhead program is to promote the use of water-efficient shower heads. To that end it will provide a $10 voucher towards the purchase of designated 'Smart Showerheads' at certain retailers in parts of NSW. Similar programs don't yet exist in other states; CHOICE would like to see them.

All the Smart Showerheads are AAA-rated, but not all AAA-rated shower heads are eligible for the discount. The models in this trial that are part of the program are the **CON-SERVs**, the **DELRANAs**, the **FLEXISPRAYs**, the **GROHE** and the **INTERBATHs**. For more information and to get a discount voucher, contact 1800 356 555.

TIP

There are two varieties of water-efficient shower head: one uses a flow regulator and the other a flow restrictor. A flow regulator will counteract higher water pressure by further restricting water flow. A flow restrictor, on the other hand, won't do as good a job at keeping the flow rate down if you happen to live in an area that has very high water pressure. Under these circumstances, a AAA-rated shower head with a flow restrictor might not keep the rate under 9 L per minute.

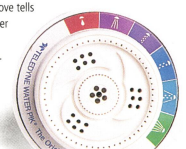
Most of the shower heads in this trial use regulators, not restrictors. Unfortunately, you probably won't learn this from the packaging — you'd have to ask the manufacturer. In this trial, the only shower heads that use restrictors are both DELRANAs and the RIO.

Spray settings

Half the shower heads in the trial have adjustable settings that allow you to change the spray pattern (wide, narrow, massage, etc). The setting selections on the **TELEDYNE**, below, are a good example of easy adjustability. Said one trialist: "It had so many options to choose from and each had a picture of what the spray would look like."

But some shower heads are not so easy to use. For example, to adjust the **INTERBATH Hi-Lo Adjustable Shower Arm B27425/28444** when the shower was on, the trialists had to reach into the spray, which some didn't like; and many trialists found the adjustment setting on the **SHOWERKING — The Rejuvenator** hard to turn.

The table above tells you which shower heads have an adjustable spray.



Trialists liked the variety of settings on the Teledyne Water Pik.

wer spray adjustments	1 Effectiveness score (%)	2 Comfort score (%)	3 Overall score (%)	Brand / model (in rank order)	
e, centre spray, pulse, turbo pulse, spray-pulse, outside spray	90	90	90	**TELEDYNE** Water Pik SM-64E **(A)**	
y, massage	84	82	83	**CON-SERV** DS 002B **(B)**	equal
sage, full, combination	83	83	83	**SHOWERKING** — The Pulsator	equal
fine, massage	85	79	82	**FLEXISPRAY** Conserva Calypso Massage 31-0753 **(C)**	
	77	82	80	**BRASSHARDS** SR331C	
	81	78	80	**FLEXISPRAY** Conserva Calypso Hi Rise 31-0593 **(C)**	equal
ttings	81	78	80	**GROHE** Relexa 28 200	equal
sage, fine, combination	77	71	74	**DELRANA** R120CP	
cle, gentle rain, strong spray	73	72	73	**INTERBATH** Hi-Lo Classic II Rainmaker B27425/25200CW **(D)**	
	75	69	72	**CAROMA** Bathmates 314123 W	
rse, regular, needle	75	68	72	**INTERBATH** Hi-Lo Adjustable Shower Arm B27425/28444 **(D)**	equal
	74	67	71	**IRWELL TAPS** Australis 823841C	
	72	69	71	**RIO** 1661	equal
	70	69	70	**IRWELL TAPS** All Directional 823105	
	69	69	69	**CON-SERV** DS 003 **(B)**	
spray, shower/massage, pulsating massage, economy soft, pause	67	68	68	**SHOWERKING** — The Rejuvenator	
sage, fine, combination	68	63	66	**DELRANA** Kestrel Massage R140CP	
	50	53	52	**AMWAY** Shower Rose E-9444A	
	45	51	48	**DES DUNNINGS** All Directional G119	
	35	41	38	**BRASSHARDS** SR116C	

* Recommended retail price.

(A) This model has been tested according to the standard for the AAA rating and is awaiting accreditation.

(B) Con-Serv has advised us that the DS models will now be called OH.

(C) These models are currently awaiting renewal of their AAA accreditation, which has to be applied for every few years.

(D) These models are currently being retested according to the standard.

(E) Manufacturer states 10 years, packaging states five years.

(F) Manufacturer states five years, packaging states two years.

(G) Price paid.

Saving water, energy and money

If conserving water and reducing pollution aren't enough to interest you in a water-efficient shower head, consider this: experts estimate that a AAA-rated shower head can save as much as $50 to $100 a year on a household's water and energy bills. Here's how:

- **Water:** The average Australian household uses over 55,000 L of water each year for just showering (total annual water consumption per household is around 300,000 L).

While the average shower head pumps out between 15 L and 25 L per minute, a AAA-rated shower head will cut that back to 9 L (or less) per minute, saving each household about 25,000 L of water each year. You could see savings of about $20 per year on your water bills, depending on your water rates.

There are shower heads available that make claims about water efficiency but haven't been AAA-approved — there's no way for you to know whether they meet their claims. There are also some that are rated AA and A — these have to meet less stringent flow-rate requirements (AA is from 9 L to 12 L per minute, and A is from 12 L to 15 L per minute).

- **Energy:** Total annual energy consumption of an average home is around 9000 kWh. The process of producing this energy releases 9 tonnes of greenhouse gases into the atmosphere (assuming your household relies on coal-generated electricity, not gas or hydro power).

On average, 30–40% of this energy is used to make hot water — that's the largest single use of energy in the home. Half the hot water is used for showers.

A switch to AAA-rated shower heads can dramatically reduce a household's energy consumption, saving nearly one tonne of greenhouse gases each year. Depending on your energy rates and whether you use gas or electricity for water heating, you could cut about $30 to $80 off your power bills each year.

TIP

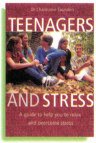
- **Low-flow shower heads are generally not suitable if you have either a gravity-fed or instantaneous hot water system, or if your household simply has insufficient water pressure.**
- **Low-flow shower heads also aren't recommended if your existing shower experiences bad temperature fluctuations when other taps in the house are turned on.**

1 Effectiveness score
We asked trialists to rate how effective the shower heads were at wetting their body and hair, then rinsing off soap and shampoo. They also rated the coverage of the spray. These assessments were combined to yield a single score for effectiveness.

2 Comfort score
To rate comfort, the trialists scored the feel of the spray on their body and hair.

3 Overall score
The scores for effectiveness and comfort were weighted equally to get the overall score.

Teenagers and Stress



Teenagers and Stress examines some of the common causes of stress that Australian teenagers face, and provides realistic explanations and advice to help them recognise what stress is and learn how to cope with it. It looks at stress and school, health, drugs and alcohol, sexuality, emotions, work, home and personal growth.

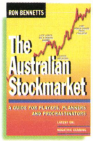
$17 Code: TAS

Welcome to the Investment Club

Investment clubs are becoming very popular. They allow groups of people to band together, exchange information and pursue (hopefully) both profitable and pleasurable investments. This book explains what investment clubs are, how they work and how you can establish one.

$17 Code: WTIC

The Australian Stockmarket



This is *not* a beginner's guide to the stockmarket — it assumes you know a little and want to know more. It contains information about the stock and related markets, with details about market cycles, derivatives, taxation and investment strategies, and it discusses how economic events affect the stockmarket.

$17 Code: ASTM

The Cambridge Factfinder

If you have children doing assignments or you love doing crosswords and puzzles, *The Cambridge Factfinder* will interest you. It helps answer those many niggling questions.

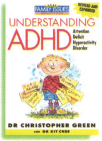
$30 Code: CFF

Super Simple Superannuation

After reading *Super Simple Superannuation* you'll have a better understanding of what superannuation is, how it works and how you can maximise your returns from it. Written in an easy-to-understand style, this book will help you to make informed decisions about your super.

$25 Code: SSS

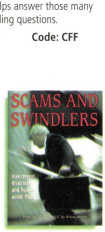
Understanding ADHD



An extensive yet easily understood guide to this upsetting and misunderstood condition. This is a practical approach — looking at what the condition is, its effects and what the family, friends, schools and the child can do to improve the situation. It includes the latest research.

$20 Code: ADHD

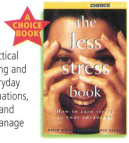
Scams and Swindlers



Here are 10 startling yet true examples of Australian financial scams and swindles. The book shows how each event happened and clearly explains what to look out for in similar situations. A stimulating read that also provides tactics to help you avoid being caught up in similar financial disasters.

$25 Code: SCAM

The Less Stress Book



The Less Stress Book is a down-to-earth, practical guide to coping, surviving and even flourishing on everyday stress. It includes explanations, case studies, checklists and exercises to help you manage stress.

$16 Code: LSB

The Australian Home Guide to Medication

Over 600 drugs are listed here (brand names are listed under generic names and referenced in the index). Details include the uses, forms, dosages, side effects, interactions, whether they are a prescription drug and on the PBS, precautions when taking and, topically, a 'permitted in sport' category.

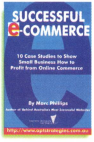
$15 Code: AHGM

Team Play

Nearly everybody works as part of a team at one time or another, and getting the most from all team members can be difficult. *Team Play* looks at the dynamics and personalities that make up a team. It provides exercises and tools that you can easily apply to your work situations to get the best performance from all members of your team.

$20 Code: TPLY

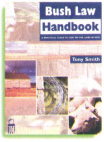
Successful e-commerce



Successful e-commerce lets you learn from 10 successful small Australian companies who have used e-commerce to improve their businesses. It examines the practicalities of setting up an online business, including implementation costs, establishing profit margins and the merging of online and traditional business practices.

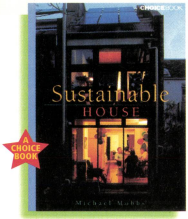
$20 Code: SEC

Bush Law Handbook



This is a comprehensive guide to the law and how it affects those in the bush. It covers a wide range of topics, from buying and selling property to divorce or family property transfers, from mining and minerals claims to native title. This is an invaluable resource for those on the land in NSW. *Applicable to NSW land owners only.*

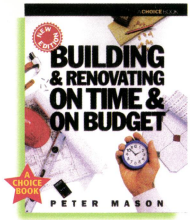
$35 Code: BLHB



Sustainable House

Sustainable House explains how to create a home that is environmentally friendly — yet still a comfortable family home. It provides information to help people who have no building, engineering, design or house-building skills to generate electricity and recycle water. Extensively illustrated, it also includes examples of similar projects from other parts of Australia and overseas, plus contact details for suppliers.

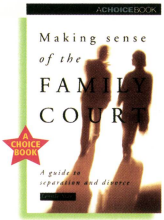
$30 Code: SUSH



Building & Renovating on Time & on Budget

Your house is likely to be your biggest single asset. So if you're having a house built for you, or you're going to renovate, it would be nice to feel in control. For many people, however, building and renovating turn into a nightmare. This book gives you a blueprint for avoiding the nightmare. It covers choosing the right builder, the role of the owner-builder, building terms, insurance, cost control, disputes and complaints. Most importantly, it explains what tasks are needed to be done in what order by which tradesperson. It also looks specifically at kitchens, bathrooms and swimming pools.

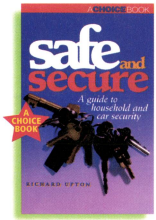
$20 Code: BROT



Making Sense of the Family Court

Making Sense of the Family Court aims to make separation and divorce less stressful for all involved. Written in everyday language, it outlines the processes of the Family Court, clearly explaining what happens, how the court works, what it can do and where to find further help and information. It includes a glossary of the legal terms and phrases involved in family law, and a list of the forms used by the Family Court.

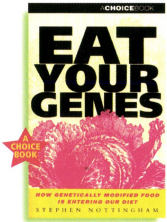
$16 Code: MSFC



Safe and Secure

It's important to take every step to maximise your safety and that of your family and your property. *Safe and Secure* covers a range of safety options for a variety of situations. It includes details about 'burglar-proofing' your home, safety when driving, walking or on public transport, and the locks and doors you should consider for your home.

$17 Code: S&S



Eat Your Genes

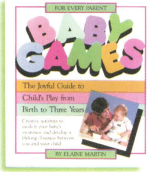
Eat Your Genes looks at genetically modified foods and how they've made it onto the market so quietly and quickly. It explains what these new foods are, how they're produced, why they remain unlabelled and how they're arriving on our plates unannounced. *"...takes a balanced and rational approach..."* Rosemary Stanton

$25 Code: EYG

Safer Pest Control for Homes and Gardens

Anyone who uses pesticides in their home or garden should consult this book about the dangers and the safer options that are available. It provides easy-to-understand information about how common pesticides work, what they're good for, and when it might be better *not* to use them.

$16 Code: SPC



Baby Games

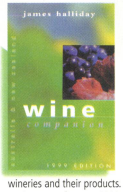
Baby Games is full of games to play with children from birth to three years. It encourages play — one of life's best learning experiences — and singing, and helps you to have a wonderful time while playing with your child.

$20 Code: BG

TV-free Activities for Kids

Ideas for over 300 fun activities for children. Each activity lists which age group it suits, whether an adult needs to supervise, if pens, pencils or other tools are needed, and if there is a specific learning outcome. The activities are for children 2-10+.

$15 Code: TVFA



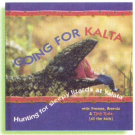
Australian and New Zealand Wine Companion

If you love wine and want to know a bit more about what's available, this guide provides you with a wealth of information about hundreds of Australian and New Zealand wineries and their products. James Halliday gives his tasting notes for over 1000 Australian and New Zealand wines, including advice on each wine's characteristics and what to eat with it.

$20 Code: ANZW

Going for Kalta

This is the story of hunting for Kalta (sleepy lizards) at Yalata, South Australia. The book shows the children hunting, capturing and eating the lizards, and includes some Pitjantjatjara words for readers to learn. Winner of the 1998 Australian Awards for Excellence in Educational Publishing in the category Primary — Single Book.

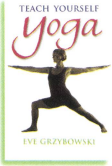


$20 Code: GFK

Teach Yourself Yoga

Yoga is a form of exercise that strengthens and relaxes not only the body, but also the mind. This book provides easy-to-follow exercises and lessons that are especially suitable for beginners. The exercises are clearly explained, with photographs to help the reader achieve yoga postures. The book includes advice for those with special conditions.

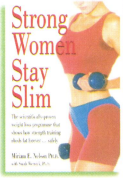
$17 Code: TYY



Strong Women Stay Slim

Strong Women Stay Young showed the benefits of strength training for women. This new book shows how, by combining strength training with a sensibly designed eating plan, women can maximise their weight loss and maintain a healthy body.

$25 Code: SWSS



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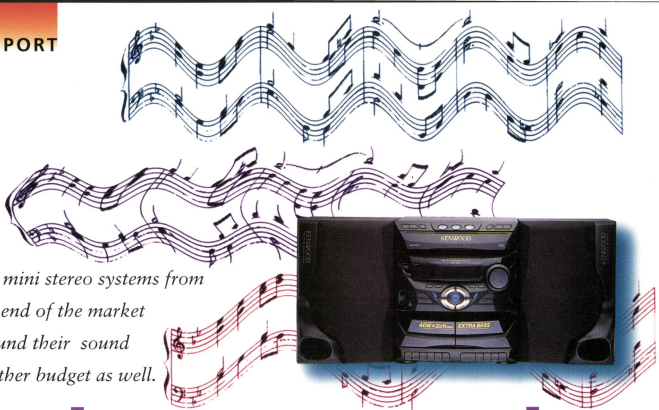

We tested mini stereo systems from the lower end of the market — and found their sound quality rather budget as well.

Budget sound

WHEN AUSTRALIANS BUY A STEREO system, in two out of three cases it's mini in size. In CHOICE, December 1997, we looked at mini systems (without a turntable) priced from $550 to $800, and found acceptable sound and plenty of features and functions.

This time we tested 10 models from a lower price bracket — $300 to $600.

What you get

Components

All the tested models have:

- Two speakers.
- Amplifier (generally with preset graphic equaliser modes rather than fully adjustable settings for bass and treble).
- AM/FM radio tuner.
- Dual cassette deck that lets you record from the tuner, the CD player, the second cassette drive and — except for the **SONY** — from an external source such as a VCR or TV.
- Multi-CD player.
- Remote control.

Performance

The systems have a number of limitations:

- They're not for the critical listener. Generally, their sound quality is acceptable at best (don't expect high-fidelity reproduction), with the speakers being the main limiting factor (see *Speakers*, below).
- They're not for large areas. Some of the amplifiers aren't very powerful and restrict the system's use to small rooms.

However, if you're mainly interested in using the systems for background music, or as a second stereo for your bedroom or your children, one of the better models tested may be for you.

Features

Generally, you can't expect as many features and functions in this price range. For example, only the **YAMAHA** has Dolby noise reduction or a tape counter, and features that are standard in more expensive models (such as auto preset of radio stations or 'surround sound' modes) are only found on some of the systems we tested.

Speakers

Generally, it's the speakers that bring the sound quality down. Most of them can't evenly reproduce the full range of frequencies that's audible to the human ear — particularly very low and very high frequencies.

Replacing the speakers may improve the sound. However, it's important to match them to the amplifier,

WHAT TO BUY

KENWOOD XD-301	$399

IN BRIEF

- **If you're not a critical listener, you may find the sound from these systems acceptable. However, it isn't hifi quality, and the speakers are the main limiting factor.**
- **These systems are more suitable for smaller areas such as a bedroom than larger living areas, and don't offer as many features as more expensive models.**

so try before you buy. And be aware that a pair of decent hifi speakers can easily cost as much as the whole mini system.

The **SONY** speakers in particular performed extremely poorly in our technical tests. We suspected there was a fault and bought a second sample to test — with the same poor results.

However, when our testers listened to the systems, some of them found the **SONY's** sound acceptable — which shows that technical performance doesn't necessarily match individual perceptions. So make sure you listen to a system before you buy (see *What to look for*, right).

Other components

Amplifier

The **PHILIPS** scored the lowest in most amplifier tests, while the **KENWOOD**, **PANASONIC** and **SONY** consistently achieved high scores. The others performed quite similarly to each other.

Tuner

The **AKAI** has the best tuner overall, the **JVC** and **PHILIPS** the worst. The others are again similar.

Cassette deck

Overall, the cassette decks are of relatively low quality. All but the **SONY** and **PIONEER** produce distorted sound (due to variations in the tape drive's winding speed) that's particularly noticeable on solo instrumentals.

In most cases, the sound quality of copied tapes was considerably worse than that of the original.

CD player

The CD players generally measured up well, though the **PHILIPS** couldn't handle the 'dust dots' on our test CD as well as the other models.

Some CD players were sensitive to knocks and to vibrations from the speakers when playing loud music. If this is a problem with your system, move the speakers further away from the main unit, or put them on a piece of foam to help absorb the vibrations.

The Philips (above) shows what a good remote can look like (clearly laid out and with well spaced keys). The JVC (right), on the other hand, is cramped, with 40 small and closely spaced buttons.

- **Features**: Think about what's important for you. For example, for playing party music, a multi-CD player that plays tracks in random order or lets you program a selection of tracks will be very useful.
- **Sound quality**: Technical specifications don't necessarily tell you whether you'll like the sound, so it's important to listen to several models and compare them before you buy.
  — Take a CD and a tape to the shop, and play a track you know well.
  — Ask whether the shop has a dedicated listening room, as there may be too much background noise in the showroom to properly assess a system's sound quality.
  — Turn up the volume to a level you'd normally listen to. Also check at what volume the sound starts to distort (for party music).
  — Listen to the breaks between CD tracks and play a blank tape to find out whether the system produces any disturbing sounds (such as hums or rattles).
- **Ease of use**:
  — Check whether the display shows useful information (such as the number of a CD track, or a radio station's frequency). A flashy, colourful display might look impressive, but if it doesn't tell you anything, it may become annoying after a while.
  — Make sure the main controls are well-labelled and easy to use. You shouldn't have to consult the instructions every time you want to reset radio stations.
  — Look for a remote control that's well labelled and has well laid-out buttons.

The Panasonic's display is dominated by a 'spectrum analyser' of limited use, while important information is shown at a very small size and is difficult to read.

PROFILES

The KENWOOD was the clear winner in this test. However, in case you're not able to find it, we've profiled the top four models in rank order from left to right. Prices shown are a good target to aim for when shopping around, based on nationwide checks in October 1998. Anything lower is a bargain.

KENWOOD XD-301

Target price: $399

Good points

- Best speakers.
- Best amplifier.
- Good remote control and instructions.
- Comparatively high power output makes it suitable for small to medium-sized rooms.

Bad points

- Tape drives produce audible sound distortion due to varying winding speeds.
- Sound quality of copied tapes is relatively poor.
- When one CD is playing, you can't change the others.
- Some controls on the system are difficult to use.

AKAI AC-220

Target price: $399

Good points

- Very good radio tuner.
- One of the better cassette decks in the test.
- The speakers reproduce low and mid frequencies well, but aren't as good at the higher end of the range.
- The only system in the test with balance control (which means you can emphasise one speaker's output over the other's — handy if you can't sit precisely between the speakers).

Bad points

- Lowest power output of all the tested systems, so only suitable for smaller rooms.
- Tape drives produce audible sound distortion due to varying winding speeds.
- Some controls on the system and on the remote are difficult to use.
- Display is difficult to read.

What about the rest?

- **The other models were mainly let down by speaker performance and, in the case of the SHARP CD-C451H, ease of use.**

TEAC DC-D4800

Target price: $399

Good points

- The speakers reproduce low and mid frequencies well, but aren't as good at the higher end of the range.
- Powerful enough for small to medium-sized rooms.
- Has edit-to-tape feature, which allows easier recording from CD to tape — for example, it automatically selects tracks to fit the available tape length.

Bad points

- Tape drives produce audible sound distortion due to varying winding speeds.
- Display doesn't give much information.
- Remote control is large and awkward to hold.
- The only way you can select the preset radio stations is by the remote.

YAMAHA GX-50

Target price: $599

Good points

- Good instructions.
- Highest power output of all the tested systems, so it's suitable for small to medium-sized rooms.
- Cassette deck has Dolby noise reduction and tape counter.

Bad points

- Speakers don't reproduce high frequencies well.
- Tape drives produce audible sound distortion due to varying winding speeds.

	Brand / model (in rank order)	Manufacturer/ distributor	Origin	Target price ($)*	Warranty (years)	Main unit dimensions (W x H x D; cm)	Dimensions of each speaker (W x H x D; cm)	CD holder	Output power (W)	1	2 TUNER FEATURES Number of station presets (AM / FM where applicable)
	KENWOOD XD-301	Kenwood	Malaysia	399	2	29 x 33 x 43	23 x 33 x 31	Carousel	33		30
	AKAI AC-220	Akai	China	399	1	28 x 32 x 36	21 x 32 x 27	Carousel	6		30
equal	**TEAC** DC-D4800	Teac	China	399	1	29 x 36 x 40	21 x 36 x 25	Carousel	27		20 / 20
	YAMAHA GX-50	Yamaha	Malaysia	599	2	28 x 32 x 36	20 x 32 x 24	Carousel	41		40
equal	**PIONEER** XR-A100	Pioneer	Malaysia	499	2	28 x 31 x 34	20 x 31 x 23	Carousel	22		24
	SHARP CD-C451H	Sharp	Malaysia	499	1	28 x 31 x 35	21 x 31 x 27	Carousel	33		40
equal	**PANASONIC** SC-AK15	Panasonic	Singapore	599	1	28 x 34 x 34	22 x 34 x 25	Drawer	32		12 / 12
	PHILIPS FW-339C	Philips	China	399	1	27 x 32 x 35	22 x 32 x 27	Carousel	10		40
	JVC MXD301T	Hagemeyer	Malaysia	499	3	27 x 30 x 34	22 x 30 x 28	Drawer	11		15 / 30
	SONY MHC-GRX2	Sony	China	499	3	29 x 33 x 37	23 x 33 x 23	Carousel	32		10 / 20

What most don't have:

■ **Treble enhancement.**
■ **Output sockets for a subwoofer or surround speakers.**
■ **Dolby noise reduction (except the YAMAHA).**
■ **Tape counter (except the YAMAHA).**
■ **Only the JVC, PANASONIC and YAMAHA cassette decks have auto tape type select (which automatically recognises and adjusts to the tape type), repeat play (the tape automatically rewinds and plays again) and program search (which automatically fast winds to the beginning of each track if there are at least four seconds between tracks).**

Features they (nearly) all have

■ Infrared **remote control** for power (on/standby), select mode (CD, tuner, tape, auxiliary), CD (disc select, play, stop, fast forward and backward search, pause, forward and back skip), tuner (band select, select preset stations) and volume control.

On some models you can also remote-control tape functions — see the table for details.

■ **Standard accessories**
— Instruction manual.
— Batteries for the remote (except the **SONY**).
— AM loop, FM wire.

■ **Sockets**
— Audio in (except the **SONY**), which allows you to connect an external source, such as a VCR, TV or laser disc player. You can then listen to its sound via the stereo system's speakers, or record it to tape.
— Headphones.

■ **CD player**
— Carousel or drawer for three CDs (except the **PANASONIC**, which can hold five).
— Programmed play: A number of tracks from one or more CDs can be programmed to be played in a selected order.
— Repeat play (except the **PHILIPS**): At least 20 tracks from one or more CDs or a programmed selection of tracks can be played repeatedly.
— Random play: Tracks from one or all CDs can be played in random order.
— While playing one CD, you can change the others (except the **KENWOOD** and **PANASONIC**).

■ **Tuner**
— AM and FM bands.
— Digital clock.
— On/off timer: The system can be programmed to switch on and off at preset times.

■ **Recording**
— You can record on tape from the CD player, tuner, second cassette drive and — except for the **SONY** — external sources such as a VCR, TV or laser disc player.
— Record timer (except the **PHILIPS** and **SONY**): You can program the system to record from the tuner at a preset time.

■ **Sound effects**
— Bass enhancement.
— Preset graphic equaliser modes (see notes 6 and 7, right).

All but the Panasonic and JVC have a carousel that holds three CDs (left). Those two models stack the CDs in a drawer (right) — three in the JVC, five in the Panasonic.

2	3	4	5	6	7	8	9	10	11	12	
		TAPE FEATURES		SOUND EFFECT FEATURES							
l via e		Auto reverse	High-speed copying	Personalised graphic equaliser modes	'Surround' graphic equaliser modes	Microphone mixing / karaoke	Speaker performance score (%)	Other components: technical performance score (%)	Ease of use score (%)	Overall score (%)	Brand / model (in rank order)
						✓	88	81	74	82	**KENWOOD** XD-301
			✓			✓	73	83	68	75	**AKAI** AC-220
							70	78	72	73	**TEAC** DC-D4800
		✓✓	✓	✓	✓	✓	67	81	74	73	**YAMAHA** GX-50
		✓		✓	✓	✓	59	82	74	70	**PIONEER** XR-A100
		✓			✓		65	81	67	70	**SHARP** CD-C451H
		✓✓		✓	✓		60	78	71	69	**PANASONIC** SC-AK15
		✓	✓		✓		63	70	76	69	**PHILIPS** FW-339C
		✓✓			✓		55	74	71	66	**JVC** MXD301T
							27	81	77	58	**SONY** MHC-GRX2

equal
equal
equal

*Prices shown are a good target to aim for when shopping around, based on nationwide checks in October 1998.

1 Output power
To compare the power of stereo systems, the volume is turned up until the sound reaches a certain level of distortion. Most people will be able to hear distortion when it affects 0.5% or more of the total sound. The table shows the power level at 1% distortion — if this is reached at relatively low wattage it will limit the size of room you can effectively listen to the system in.

Manufacturers often claim the power of their products at 10% distortion — a figure that doesn't tell you much, as you wouldn't want to listen to music that's 10% distorted.

Mind-boggling power claims (such as the **PHILIPS'** 800 W) usually refer to the 'peak music power output' (PMPO) of the system — a figure that's calculated from specific very loud noises and is often regarded as meaningless.

2 Number of station presets
The numbers in this column tell you how many radio stations you can store. Some models limit the number per band (AM or FM), others have a total number regardless of the band.

3 Auto preset
All the tested models automatically tune in radio stations and let you store them manually (in the order you want). Models with a tick in this column can also automatically store the stations in their order on the frequency bands.

4 Auto reverse
One tick indicates that one of the tape drives has auto reverse; models with two ticks have auto reverse on both drives.

5 High-speed copying
A tick in this column indicates you can copy tapes at a speed faster than normal play.

6 Personalised graphic equaliser modes
All the tested models have a graphic equaliser with several preset sound modes for different types of music. Models with a tick in this column allow you to program your own preferred settings.

7 'Surround' graphic equaliser modes
Models with a tick in this column have one or more preset 'surround sound' modes that simulate different venues (for example, a concert hall or stadium).

8 Microphone mixing / karaoke
Models with a tick in this column allow you to connect a microphone to record sound onto a tape, or to mix sound by playing a tape or CD and singing or speaking into the microphone at the same time.

They also have a karaoke feature, which allows you to reduce the vocal part of a recording so you can have karaoke singalongs.

9 Speaker performance score
We assessed the speakers' most important characteristic — their frequency response. This shows their ability to evenly reproduce the frequencies audible to the human ear. Missing or over-emphasised frequencies may lead to unbalanced sound.

10 Other components: technical performance score
We assessed the technical performance of the amplifier, tuner, tape deck and CD player with a range of standard tests and measurements.

11 Ease of use score
A user panel assessed the following:
- Controls (for labelling, layout and size of knobs and buttons).
- Remote control (for its size and shape, and the labelling, layout and size of keys).
- Display (for example, how easy to read and how useful the displayed information is).
- Instruction manual (for example, quality of diagrams and descriptions, presence of electrical safety information and a troubleshooting guide).

12 Overall score
The overall score is a combination of the performance of the speakers and other components, and ease of use, weighted as follows:
- Speakers: 40%.
- Other components: 30%.
- Ease of use: 30%.

RECALLS & BANS

If you find a recall or ban not on our list, please let us know. Companies often rent 1800 numbers for a couple of months after the recall is announced. If the number given is no longer operating, phone the manufacturer or retailer direct.

THE PRODUCT: Holeproof has recalled **Rio Infants Fashion Socks, style L7900E** in navy and ecru (cream), sizes 0-1,1-2 and 2-4, with boy- and girl-bear appliqués attached to the cuffs of the socks. The style has been sold through Big W stores since March 1998.

The problem: The appliqué bears may come off, posing a choking hazard.

What to do: Stop using the socks and return via freepost for a replacement pair of socks to: Reply Paid 110, Rio Infants Socks Recall, PO Box 168, Nunawading 3131. For more information call (03) 9210 2341, 9 am to 5 pm (EDST), Monday to Friday.

THE PRODUCT: Holden has recalled **Statesman VR, VS and VS Series II**, built between December 6, 1993, and February 14, 1997, with vehicle identification numbers (ISOVIN) 6H8VRY19URL674058 to 6H8VSY19HVL213857; and **Caprice VR, VS** — built between December 6, 1993, and May 30, 1996, with ISOVIN 6H8VRZ19URL676992 to 6H8VSZ19HTL939663. The ISOVIN, printed on a label, can be seen through the lower left-hand corner of the windscreen.

The problem: Battery vapours could damage a headlamp connector and cause an electrical short circuit, which could cause the headlamp wiring insulator at the connector to ignite.

What to do: Contact any Holden dealership immediately and arrange to have the fault rectified. For any further information call Holden customer assistance on 1800 033 349, 7 am to 8 pm EDST Monday to Friday, 9 am to 1 pm EDST Saturday.

THE PRODUCT: Mitsubishi Motors Australia has recalled the **PA Challenger, Program 9801**, built between December 11, 1997, and May 18, 1998.

The problem: The front brake tube may interfere with the inner fender panel, which may damage the front brake tube, resulting in loss of brake fluid.

What to do: Contact your Mitsubishi dealer to have the front brake pipes on your vehicle inspected and, if required, replaced free of charge. For further information contact the Customer Relations Manager at your Mitsubishi state regional office during normal working hours.

THE PRODUCT: Yamaha Motor Australia has recalled **Motorcyle YZF-R1**, 1998 model.

The problem: The clutch-driven gear drive plate may break, causing engine lock-up and consequent loss of control of the motorcycle.

What to do: Don't drive the motorcycle. Contact your nearest Yamaha motorcycle dealer to arrange for the appropriate new part and also an improved rear-wheel sprocket hub to be fitted — both free of charge. For further information contact Yamaha Service Department on (02) 9757 0011, 8.30 am to 4.30 pm EDST.

THE PRODUCT: Honda has recalled **Honda Accord sedans, 1995–1997** models and **Honda Accord wagons, 1995–1996** models, with the following vehicle identification numbers:

Accord sedans

- JHMCD5200 C100006-C317816
- JHMCD5540O C100193-C319619
- JHMCD5550O C100029-C320368
- JHMCD56200 C100001-C320386
- JHMCD56400 C100061-C320399
- JHMCD56500 C100285-C318354

Accord wagons

- 1HGCE18700 A101209-A200002

The problem: The air conditioner wiring harness may have been routed incorrectly, leading to the possibility of a short circuit and consequently a fire risk.

What to do: Contact any Honda dealer for an inspection and, if necessary, a replacement free of charge. For further information contact Honda Australia on 1800 672 217, 9 am to 5.30 pm EDST.

THE PRODUCT: Australian Nursery Distributors has recalled the **child's wooden slatted cot, model numbers 2075** and **2660**. The affected cots have been sold since April 1, 1998, in World 4 Kids stores and independent nursery retailers, and can be identified by a label on the mattress base that states: "Imported by Australian Nursery Distributors Pty Ltd, manufactured in Taiwan. mfr date: 3-25-98 & 7-5-98."

The problem: There may be a limb entrapment hazard, as the gap between the bottom dropside rail and the mattress base is out of alignment.

What to do: If you have one of these cots, don't use it. Call 1800 090 657 to arrange for an inspection of the cot and free repair.

THE PRODUCT: Boian Surgical has recalled the **Medel Humimist Humidifier model UF 508, Aust L 63307**.

The problem: The two sections of the product's tank can be separated, allowing access to the water while it's on. Contact with the water could result in an electric shock.

What to do: Stop using it immediately, unplug and return it to the point of sale, along with any unused humidifier sachets, for a refund. For further information call Boian Surgical on (02) 9580 7447.

THE PRODUCT: Target has recalled the **Team Issue bicycle helmet, model 216**, sold in Target stores between August 26, 1998, and September 14, 1998. The name Team Issue appears on the helmet, which is blue or burnt orange.

The problem: The helmet fails the impact requirement of the mandatory safety standard.

What to do: Return it to your nearest Target store for a full refund. For further information call 1800 814 788.

THE PRODUCT: Sigma has recalled supplies of **96 Pack Guardian Paracetamol Extra Tablets, batch 68815, expiry July 2000.** A small number of packs have been sold in Victoria only.

The problem: The foil wrapping is incorrectly labelled paracetamol 325 mg and pseudoephedrine hydrochloride 30 mg. The tablets in fact contain paracetamol 500 mg and codeine phosphate 8 mg.

What to do: Don't take the tablets. Return them to the place of purchase for refund or replacement.

SAFETY NOTICE

THE PRODUCT: Holden has issued a safety notice for **Vectra JS Series sedans** and **station wagons** made between July 1998 and September 1998 with VIN (vehicle identification numbers) L314383 to L378443; and **Vectra JR Series** made between April 1997 and February 1998 with VIN V5125546 to W5066141. The VIN can be found on the compliance plate located under the bonnet on the driver's side between the air cleaner and the bonnet hinge.

The problem: The brake fluid reservoir cap may allow water to enter the brake fluid reservoir, resulting in less effective braking performance.

What to do: Return the vehicle to your nearest Holden dealer for a free replacement brake fluid reservoir cap. The brake system will be bled and the brake fluid replaced free of charge. For further information contact the Holden Customer Assistance Line on 1800 033 349, 7 am to 8 pm EDST Monday to Friday, 9 am to 1 pm EDST Saturday.

Financial bans

CHOICE doesn't usually publish individuals' names, but when someone who has access to consumers' life savings is found guilty of dishonesty or negligence, we think you need to know. This information is also publicly available from the Australian Securities and Investments Commission (ASIC). For more information contact the ASIC infoline on 1300 300 630.

THE SERVICE: Christopher Paul Woolgrove of Hillbank, SA, has been given a suspended jail sentence by the Adelaide Magistrates Court. ASIC has banned Woolgrove for life from being involved in the securities and investment industry.

The problem: Woolgrove raised money from investors for two ocean salvage schemes. These schemes did not comply with the Corporations Law in that there was no approved deed or prospectus issued.

THE SERVICE: Former Toukley (NSW)-based securities representative **Robyn Ann-Carrolle Cochrane** has agreed not to act as an investment adviser or securities dealer or a representative of an investment adviser or securities dealer, nor to apply for the relevant licences until October 20, 2008.

The problem: Cochrane provided investment advice to members of the public and clients of Guardian Independent Investment and Chapel Road P/L without a dealer's licence, an investment adviser's licence or a proper authority from a licensee, as required by the Corporations Law.

THE SERVICE: Melbourne investment adviser **Peter Ness** has been banned by ASIC until September 30, 2001, from acting as a representative of a dealer or investment adviser.

The problem: ASIC alleges that Ness carried on an investment advice business in his own right when he did not hold a licence and recommended investments in three companies which are now in liquidation: Media Asia Pacific Ltd, EC Consolidated Capital Ltd and Lateral Trading Ltd.

Order Form

CHOICE Products

Australian Consumers' Association 57 Carrington Road, Marrickville NSW 2204 **Phone** Subscriptions: (02) 9577 3399 General: (02) 9577 3333 **Fax** (02) 9577 3355

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2 years	132		....	.....	.....
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Health Reader binder *(holds 2 years)*	12	White	....	.....	.....

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ABOUT THE AUSTRALIAN CONSUMERS' ASSOCIATION

The Australian Consumers' Association is a non-profit, non-party-political organisation, established in 1959 to provide consumers with information and advice on goods, services, health and personal finances, and to help maintain and enhance the quality of life for consumers. It is a Council member of Consumers International.

We are completely independent. We buy all the products we test at random in the marketplace; we never accept products to be tested as gifts or loans from manufacturers or retailers. We are not beholden to any commercial, government or union interests, and we don't accept advertising, paid or unpaid. Our income is derived from the sale of CHOICE and our other publications and products.

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Twelve-month INDEX

January 1998 — December 1998

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* indicates an update of a previous report, additions or corrections to reports, small follow-up items or letters.
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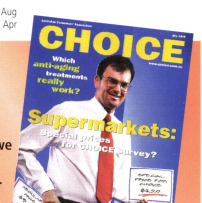
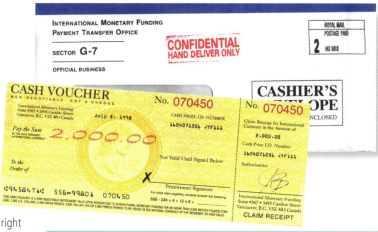


the HARD *word*

Amazing! A letter from the IMF



Well, not *the* IMF. This little gem is from the good people at Sector G-7 of International Monetary Funding in Canada. They want you to join a scheme to play lotteries in other countries.

Let's give this IMF a hand for creativity. It's enclosed a very nice-looking voucher for 2000 in cash, and you're guaranteed to get it simply by doing a bit of arithmetic and ticking a couple of small boxes — right next to the other boxes you tick if you want to send in as much as $129.95 to join the lottery deal. Yep, just do that and the 2000 is all yours.

Oops, did we leave off a currency denomination? No, we didn't. That princely sum could be 2000 British pounds, US dollars, Swiss francs or French francs. And the fine print — our favourite part of any gimmick — says the odds of your voucher being in any of these currencies is one in five million. Ouch.

Oh yeah, and the voucher could also be in Italian lira (2000 lira, by the way, is worth about $2 in Australia).

And the odds on getting Italian lira? The fine print says one in one. That should definitely cover the cost of sending the voucher back to Canada, plus you'll be able to tell your friends all about your lucrative deals in international finance: "Well, it's rather complicated and sensitive, but I *can* say I'm working closely with the G-7 and the IMF."

Details, guys, details!

A quick glance at this **Coles** flyer and what you see is $7.99/kg next to the picture of glistening skinless chicken breast fillets.

Alas, the small print says the price is for 'skin on' fillets — they probably don't take as good a picture.

Admit none

No, it's not really a free ticket to the opening ceremony of the Sydney 2000 Olympic Games. It's only a brochure telling you how to become an Olympic Club member, but the reader who received it thought it was a little misleading.

"If I were cheeky," she wrote, "I'd go out to the Olympic site and demand to get in!"

A steal at $50...

A lot of readers have sent us letters they received with offers of diamonds, garnets and other precious stones.

We were impressed with the offer below if only because of the sheer amount of paperwork involved (it weighed in at a hefty 32.5 g). This avalanche was unleashed on one of our readers in a desperate attempt to get her to part with about $50 in exchange for "two genuine Diamonds and a genuine deep red Garnet".

She mustered the will to say no, even though she was also a 'verified Award Winner' in a $30,000 draw (she was guaranteed to get $12,000, $4800, or $2.40 — we'll let these figures speak for themselves).

As for the 1 point diamonds on offer, $50 does seem like a steal considering the lovely settings pictured in the portfolio of glossy 'negatives' (we enjoyed holding them up to the light, even though they're made of paper).

Out of curiosity, though, we asked a jeweller how big a 1 point diamond is. Let's see, there are 100 points in a carat, and 5 carats in a gram. So we're looking at (or more like squinting at) about 2 mg — around 1.3 mm — worth of diamond.

How about a little help?

***The hard word* would like to thank all the readers who have responded with examples of outrageous ads, promotions and products. Please keep sending them in.**

If you have any examples that you think deserve to be on this page, send them to *The hard word*, CHOICE, 57 Carrington Road, Marrickville 2204, or email your suggestions to thehardword@choice.com.au.